Arihant Construction Co.

203-204, Orbit Plaza, 2nd floor, New Prabhadevi Marg, Prabhadevi, Mumbai – 400025
Ph no. 91 22 49153599 Fax 91 22 49153513

30/5/2026

To,
The CCF, Regional Office, Western Region,
Ministry of Environment, Forests & Climate
Regional Office (WCZ), Ground Floor, East Wing,
New Secretariat Building, Civil Lines, Nagpur- 440001

Sub: Submission of Environmental Clearance Compliance Status for period of **October 2025 to March 2026.**

Ref.: Environmental Clearance granted vide No. SIA/MH/MIS/153429/2020 dated: 08.07.2020.

Dear Sir,

With reference to the above, we wish to inform you that we have received Environmental Clearance for our Proposed Slum Rehabilitation Scheme at CTS No. 669 (pt), CTS No. 669/1 to 35 & 670, 610, 610/1 to 26, 666 and CTS No.673, 673/1 to 7, 'T' ward of MCGM, Gopal Krishna Gokhale Road, Mulund (E), Mumbai – 400081 by M/s. Arihant Construction Company.

As per conditions specified in Environmental Clearance, we are submitting herewith six-monthly Environmental clearance compliance status report for the period **October 2025 to March 2026** along with the relevant document needed for the submission as mentioned below:

1. Data sheet
2. EC Compliance report
3. Post Monitoring Report (October 2025 to March 2026)

We hope the above is to your satisfaction.

Thanking You.

Yours faithfully,

For Arihant Construction Company.

ARIHANT CONSTRUCTION CO.

Authorized Signatory

Encl: a/a

CC to:

1. **The Member Secretary, Maharashtra Pollution Control Board, 3rd Floor, Kalpataru Point, Sion, Mumbai- 400 022.**
2. **Central Pollution Control Board, Parivesh Bhavan, Opp. VNC word office No. 10, Subhanpura, Vadodara- 390023**

MONITORING THE IMPLEMENTATION OF ENVIRONMENTAL SAFEGUARDS

MINISTRY OF ENVIRONMENT & FORESTS
REGIONAL OFFICE (W), NAGPUR
Monitoring Report
PART – I
DATA SHEET

1.	Project type: River –Valley/ Mining/ Industry/ Thermal/ Nuclear/ other (specify)	:	Slum Rehabilitation Scheme
2.	Name of the project	:	Proposed Slum Rehabilitation Scheme at CTS No. 669 (pt), CTS No. 669/1 to 35 & 670, 610, 610/1 to 26, 666 and CTS No.673, 673/1 to 7, 'T' ward of MCGM, Gopal Krishna Gokhale Road, Mulund (E), Mumbai – 400081 by M/s. Arihant Construction Company
3.	Clearance letter (s)/OM no. and date	:	Environmental Clearance vide no. SIA/MH/MIS/153429/2020 dated 08.07.2020.
4.	Location		
	(a) District	:	Mumbai
	(b) State	:	Maharashtra
	(c) Location	:	Mulund, Mumbai
	(d) Latitude / Longitude	:	Latitude: 19°04'25.25"N Longitude: 72°51'58.44"E
5.	(a) Address for correspondence		Mr. Anil Deshmukh M/s. Arihant Construction Company Address: 203-204, Orbit Plaza, 2nd Floor, New Prabhadevi Marg, Prabhadevi, Mumbai – 400025. Tel No: 02249153599
	(b) Address of Executive Project Engineer/ Manager (with pin code / Fax)	:	Mr. Suresh Savekar Tel No : 9820855255 Address: CTS No. 669 (pt), CTS No. 669/1 to 35 & 670, 610, 610/1 to 26, 666 and CTS No.673, 673/1 to 7, 'T' ward of MCGM, Gopal Krishna Gokhale Road, Mulund (E), Mumbai – 400081
6.	Salient Features		
	(a) Of the project	:	Plot area: 9,407.90 sq. m. FSI area: 54,517.52 sq. m. Non-FSI area: 72,274.89 sq. m. Total Built-up area: 1,26,792.41 sq. m.

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			Building Configuration: **Building name** — **Configuration** Rehabilitation Building no. 01 — Ground + 7 floors Composite Building no. 02 — Ground + 23 floors Sale building no. 03 (Tower A & Tower B) — 2 Basements + Stilt + 1st to 10th Level podium + 11th Level open to sky Podium for Amenities + 12th to 53rd upper floors. Composite Building no. 04 (Wing A, Wing B & Wing C) — 02 Basements + Ground +23 floors
	(b) Of Environmental Management Plans	:	• **Sewage Treatment Plant-** 03 nos. of STP of total capacity 580 KL with MBBR technology. • **Tree Plantation Details-** Tree plantation will be carried out on 785.55 sq.mt. • **Rainwater Harvesting-** 05 nos. of rainwater harvesting tanks of total capacity 154 KL.
7.	Breakup of the project area		
	(a) Submergence area: forest & non forest.	:	Not Applicable as no forest land
	(b) Others	:	Not Applicable
8.	Breakup of the project affected population with enumeration of those losing houses /dwelling units only, agricultural land only, both dwelling units & agricultural land & landless labourers /artisan.	:	Not Applicable
	(a) SC, ST /Adivasis	:	Not Applicable
	(b) Others (Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details and years of survey)	:	Not Applicable
9.	Financial details		
	(a) Project cost as originally planned and sub-sequent revised estimates and the year of price reference.	:	Total project cost approx.: 291.87 Cr
	(b) Allocation made for	:	**Construction Phase:** 43.65 Lakhs

	environmental management plans with item wise and year wise break-up.		**Operation Phase:** Capital Cost: 299.37 Lakh O&M cost: 50.31 Lakh/annum
	(c) Benefit cost ratio/Internal rate of Return and the year of assessment	:	Not applicable yet to finalize
	(d) Whether (c) include the cost of environmental management as shown in the above.	:	Not applicable as (C) is yet to finalize
	(e) Actual expenditure incurred on the project so far	:	Rs. 180 Cr
	(f) Actual expenditure incurred on the environmental management plans so far	:	Rs. 139 Lakhs
10.	Forest land requirement.	:	Not applicable
	(a) The status of approval for diversion of forest land for non-forestry use	:	Not applicable
	(b) The status of clearing felling	:	Not applicable
	(c) The status of compensatory afforestation, if any	:	Not applicable
	(d) Comments on the viability & sustainability of compensatory afforestation programme in the light of actual field experience so far	:	Not applicable
11.	The status of clear felling in non-forest areas (such as submergence area of reservoir, approach roads), if any with quantitative information	:	Not applicable
12.	Status of construction.	:	
	a) Date of commencement (Actual and / or planned)	:	20.08.2020
	b) Date of completion (Actual and/ or planned)	:	20.08.2029
13.	Reason for the delay if the project is yet to start.	:	Not applicable
14.	Dates of site visits		
	(a) The dates on which the project was monitored by the Regional Office on previous occasions, if any	:	Not applicable
	(b) Date of site visit for this monitoring report	:	October 2025 to March 2026
15.	Details of correspondence with project authorities for obtaining action plans / information on status of compliance to safeguards other	:	Environmental Clearance vide no. SIA/MH/MIS/153429/2020 dated 08.07.2020.

	than the routine letters for logistic support for site visits. The first monitoring report may contain the details of all the letters issued so far, but the later reports may cover only the letters issued subsequently.		

HALF YEARLY COMPLIANCE STATUS REPORT
October 2025 to March 2026

Ref	Environmental Clearance vide no. SIA/MH/MIS/153429/2020 dated 08.07.2020. **Annexure - II**
To	M/s. Arihant Construction Company
For	Proposed Slum Rehabilitation Scheme at CTS No. 669 (pt), CTS No. 669/1 to 35 & 670, 610, 610/1 to 26, 666 and CTS No.673, 673/1 to 7, 'T' ward of MCGM, Gopal Krishna Gokhale Road, Mulund (E), Mumbai.

Status

Building	Status
Rehab 1	Completed
Composite 2	Completed
Sale 3 - Tower A	30 floors
Sale 3 - Tower B	39th part floors
Composite 4	6 floors

Specific Conditions:

Sr. No.	Conditions	Remarks
I	**PP informed that 2624.64 Sq. Meter construction was carried out in 2006-07 by earlier PP. The potential of total Construction Area of the plot in 2006 was 19829.45 Sq. Meter including Non FSI area also. The Architect Certificate to that effect was also submitted by PP. PP to provide Environment infrastructure to the existing building which has got occupation certificate also.**	Plan approved under the Slum Rehabilitation Scheme is attached as **Annexure – III.**
II	**PP to ensure that STP to be kept open minimum up to 40%. The discharge of treated sewage to be reduced to 35%.**	Yes, Agreed. We ensure that we will keep open a minimum of 40%. We will ensure to reduce final discharge of treated sewage to 35%.
III	**PP to adopt water conservation measures by providing Low Flow Devices (LFD) as plumbing fixtures**	Yes agreed, we will provide water conservation measures by providing Low Flow Devices (LFD) as plumbing fixtures before operational phase.

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IV	**PP to ensure that the energy savings from renewable sources shall be 5 %.**	Yes, we will ensure energy saving from renewable sources of about 5 % during operational phase.
V	**PP to provide Fire hydrant system fitted with all necessary Equipment's with a ladder to firemen at top of podium.**	Fire hydrant system will be provided at top of podium along with ladder and all necessary equipment's.
VI	**PP to carryout shadow analysis by selecting Typical floors of all building at all directions & weighted average readings shall be considered for the same instead of average of minimum and maximum values.**	Noted, we will carry out shadow analysis by selecting Typical floors of all building at all directions & weighted average readings.
VII	**PP to have MOU with adjacent society of building no 4, which is on south side of plot, mentioning that 6-meter open space will be available between both the societies and no compound wall to be constructed by both the societies, as agreed by PP.**	Yes, agreed. MOU with Building No. 4 will be signed for keeping 6-meter open space between both the societies and no compound wall will be constructed.
VIII	**PP to submit CER prescribed by MoEF&CC circular dated 1.5.2018 relevant to the area and people around the project. The specific activities to be undertaken under CER to be carried out in consultation with Municipal Corporation or collector or Environment Department.**	Yes, Agreed. CER approval from Municipal Commissioner is under process. Ack. Copy of same is enclosed as **Annexure – IV.**
IX	**PP to submit HRC NOC, EC is restricted to 120 m height.**	Copy of High-rise NOC is enclosed herewith as **Annexure – V**

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X	**PP to ensure that CER plan gets approved from Municipal Commissioner.**	Yes, Agreed. CER approval from Municipal Commissioner is under process. Ack. Copy of same is enclosed as **Annexure – IV.**
XI	**PP Shall comply with Standard EC conditions mentioned in the Office Memorandum issued by MoEF&CC vide F.No.22-34/2018-IA.1Il dt.04.01.2019.**	Yes, the condition is noted and will be complied with.
XII	**SEIAA decided to grant EC for— FSI: 54,517.52 m2, Non-FSJ: 72,274.89 m2 and Total BUA: 1,26,792.41 m2 (Plan Approval no SRA/ENG/1715/T/PL/AP, dt. 21.01.2020, SRA/ENG/T/PVT/0040/20040928/AP/C- 2, dt. 21.01.2020 SRA/ENG/T/PVT/0040/20040928/AP/S3 dt. 21.01.2020 SRA/ENG/T/PVT/0040/20040928/AP/C-4 dt.24.0 1.2020)**	Yes, the condition is noted & agreed.
General Conditions:		
Sr. No.	**Conditions**	**Remarks**
I.	**E-waste shall be disposed through Authorized vendor as per E-waste (Management and Handling) Rules, 2016.**	Noted & agreed. The E-waste generated will be disposed through authorized dismantler or recycler as per E- Waste Rules, 2016.
II.	**The Occupancy Certificate shall be issued by the Local Planning Authority to the project only after ensuring sustained availability of drinking water, connectivity of sewer line to the project site and proper disposal of treated water as per environmental norms.**	• Full OC received to Rehab building no. 01 under S.R. Scheme vide no. SRA/ENG/1715/T/PL/AP dated 24.01.2022. • Part OC received for Composite building no. 02 (1st to 23rd floor) vide no. T/PVT/0040/20040928/AP/C-2 dated 12.05.2023.

		Copies of the OC certificates are attached as **Annexure – VI.**
III.	**This environmental clearance is issued subject to obtaining NOC from Forestry & Wildlife angle including clearance from the standing committee of the National Board for Wildlife as if applicable & this environment clearance does not necessarily implies that Forestry & Wild life clearance granted to the project which will be considered separately on merit.**	Noted & agreed.
IV.	**PP has to abide by the conditions stipulated by SEAC& SEIAA.**	Yes, we will abide to all the conditions stipulated by SEAC & SEIAA.
V.	**The height, Construction built up area of proposed construction shall be in accordance with the existing FSI/FAR norms of the urban local body & it should ensure the same along with survey number before approving layout plan & before according commencement certificate to proposed work. Plan approving authority should also ensure the zoning permissibility for the proposed project as per the approved development plan of the area.**	Yes, height & construction built up area of proposed construction is accordance with Permissible FSI.
VI.	**If applicable Consent for Establishment' shall be obtained from Maharashtra Pollution Control Board under Air and Water Act and a copy shall be submitted to the Environment**	Yes, Consent to Establish obtained from MPCB vide no. Format1.0/BO/JD(WPC)/UAN No. 95269/CE/CC-2011000967 dated 13.11.2020.

	department before start of any construction work at the site.	Copy of the consent is attached as **Annexure – VII.**
VII.	**All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.**	Yes, all the sanitary & hygiene measures are carried out and will be maintained throughout the construction phase. Temporary toilets followed by septic tank, waste bins are provided for construction workers.
VIII.	**Adequate drinking water and sanitary facilities should be provided for construction workers at the site. Provision should be made for mobile toilets. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.**	Temporary Housing Facility, Adequate drinking water facility is provided for the construction workers at the site. Toilets are provided followed by septic tank for construction workers. Bins are provided to dispose of the MSW generated by labor during construction phase. Photographs showing facilities provided for construction workers are enclosed as **Annexure - VIII**
IX.	**The solid waste generated should be properly collected and segregated. Dry/inert solid waste should be disposed of to the approved sites for land filling after recovering recyclable material.**	The Total amount of solid waste generated is 2002 Kg/day which will properly collected and segregated and stored in separate bins. Biodegradable Waste with quantity of 799 kg/day generated in operation phase will be processed in OWC, and manure obtained will be used for landscaping. Non-biodegradable Waste 1203 Kg/day will be managed through authorized recyclers.
X.	**Disposal of muck during construction phase should not create any adverse effect on the neighboring communities and be**	The waste generated will be disposed of in compliance with Construction and Demolition Waste Management Rules, 2016.

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	disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.	
XI.	**Arrangement shall be made that waste water and storm water do not get mixed.**	Separate drainage line will be provided for both storm water and wastewater generated within site to avoid mixing.
XII.	**All the topsoil excavated during construction activities should be stored for use in horticulture / landscape development within the project site.**	Yes, all the topsoil and construction debris will be used for filling the plot and maintaining green belt development.
XIII.	**Additional soil for levelling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.**	Additional soil for leveling of the proposed site will be generated within the site to protect the natural drainage system of the area.

XIV.	**Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Dept.**	• The greenbelt is provided on ground over an area of 785.55 sq.mt.
		• Plantation Details:
		  • Existing trees: 45 nos.
		  • Trees to be cut: 24 nos.
		  • Trees transplanted: 14 nos.
		  • Trees retained: 07 nos.
		  • Trees to be planted: 139 nos.
		• A combination of native evergreen trees and ornamental flowering trees, shrubs and palms are planned in the complex.
		• Species will be selected as per CPCB greenbelt guidelines and common species available in the proposed area.

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		The landscape plan for greenbelt development is attached as **Annexure – IX.**
XV.	**Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.**	The soil quality is being monitored regularly. Post monitoring reports are attached as **Annexure – I.** There is no source of ground water at site.
XVI.	**Construction spoils, including bituminous material and other hazardous materials must not be allowed to contaminate watercourses and the dumpsites for such material must be secured so that they should not leach into the ground water.**	There is no generation of any bituminous material or any hazardous material at the site till date & if generated will be disposed as per the MPCB norms.
XVII.	**Any hazardous waste generated during construction phase should be disposed of as per applicable rules and norms with necessary approvals of the Maharashtra Pollution Control Board.**	There is no generation of hazardous waste at site till date and if generated, will be disposed as per applicable Rules & Norms with necessary approvals of the Maharashtra Pollution Control Board.
XVIII.	**The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environments (Protection) Rules prescribed for air and noise emission standards.**	1 no. of DG set of capacity 250KVA for Composite building no. 2, 3 nos. of DG sets of capacity 500 KVA each and 1 no. of DG set of capacity 400 KVA for Composite building no. 4 proposed in the operation phase as backup during power failure. The proponent will make sure that all the relevant rules and laws will be adhered to.
XIX.	**The diesel required for operating DG sets shall be stored in underground tanks and if**	Necessary permissions for storage of HSD will be taken from the authority concerned whenever required.

	required. clearance from concern authority shall be taken.	
xx.	**Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.**	The vehicles hired for bringing construction material at site will have valid PUC. All vehicles are less than 8 years old only. The vehicles used for bringing construction material will be operated only during non- peak hours.
xxi.	**Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/MPCB.**	Ambient noise levels are regularly being monitored on site. Post monitoring reports are attached as **Annexure – I.**
xxii.	**Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September 1999 and amended as on 27th August, 2003. (The above condition is applicable only if the project site is located within the 100Km of Thermal Power Stations).**	Noted & agreed.
xxiii.	**Ready mixed concrete must be used in building construction.**	Noted & agreed. We will used ready mixed concrete along with other construction material.

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xxiv.	**Storm water control and its re-use as per CGWB and BIS standards for various applications.**	The harvested rainwater will be used for secondary purposes such as flushing and gardening. Provision of 5 RWH tank of total capacity 154 KL will be carried out at site. Plans showing Rainwater Harvesting System & Strom Water Management is enclosed as **Annexure -X**
xxv.	**Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.**	Ready mix concrete is being used to reduce water demand during construction phase.
xxvi.	**The ground water level and its quality should be monitored regularly in consultation with Ground Water Authority.**	No ground water is being used for any construction activities on site.
xxvii.	**The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the MPCB and Environment department before the project is commissioned for operation. Discharge of this unused treated affluent, if any should be discharge in the sewer line. Treated effluent emanating from STP shall be recycled! refused to the maximum extent possible. Discharge of this unused treated affluent, if any should be discharge in the sewer line. Treatment of 100% grey water by decentralized treatment should be done. Necessary measures**	03 nos. of STP of total capacity 580 KL with MBBR technology will be provided at the site. Construction and installation of STPs will be carried out through an expert consultant. Treated water will be used for flushing, gardening, and greenbelt development.

	should be made to mitigate the odour problem from SIP.	
xxviii.	**Permission to draw ground water and construction of basement if any shall be obtained from the competent Authority prior to construction/operation of the project.**	Noted & agreed. Permission to draw ground water and construction of basement if any will be obtained from the competent Authority prior to construction/operation of the project.
xxix.	**Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.**	Noted & agreed. Separation of grey and black water will be done by the use of dual plumbing line
xxx.	**Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor-based control.**	Yes, low flow rate plumbing fixtures and low flush cisterns will be used during operation phase.
xxxi.	**Use of glass may be reduced up to 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.**	Noted & will be complied with. Energy modeling exercise will be conducted to determine the insulation level acceptable as per the code.
xxxii.	**Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfil requirement**	The roof insulation will be maintained as per ECBC guidelines. Energy modeling exercise will be conducted to determine the insulation level acceptable as per the code.
xxxiii.	**Energy conservation measures like installation of CFLs /TFLs for the lighting the areas outside the building should be integral, part of the project design and should**	Energy conservation report is enclosed as **Annexure – XI**

	be in place before project commissioning. Use CFLs and TFLs should be properly collected and disposed of/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels maybe done to the extent possible like installing solar streetlights, common solar water heaters system. Project proponent should install, after checking feasibility, solar plus hybrid non-conventional energy source as source of energy.	
xxxiv.	**Diesel power generating sets proposed as source of backup power for elevators and common area illumination during operation phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use low sulphur diesel. The location of the DG sets may be decided with in consultation with Maharashtra Pollution Control Board.**	1 no. of DG set of capacity 250KVA for Composite building no. 2, 3 nos. of DG sets of capacity 500KVA each and 1 no. of DG set of capacity 400KVA for Composite building no. 4 proposed in the operation phase as backup during power failure. Care will be taken that adequate acoustic will be provided to prevent noise and should conform to rules made under the Environment (Protection) Act 1986, prescribed for air and noise emission standards.
xxxv.	**Noise should be controlled to ensure that it does not exceed the prescribed standards. During night-time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.**	Ambient noise levels are maintained well within the Noise standards. Regular Noise Monitoring is carried out on site. Refer Noise reports attached as **Annexure-I.** Adequate measures are taken to reduce ambient air and noise level to

		confirm to stipulated standards by CPCB/MPCB.
xxxvi.	**Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized, and no public space should be utilized.**	Traffic congestion near the entry and exit points from the roads adjoining the proposed project site will be avoided.
xxxvii.	**Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code, which is proposed to be mandatory for all air-conditioned spaces while it is aspiration for non-air-conditioned spaces by use of appropriate thermal insulation material to fulfil requirement**	All the walls will be as per ECBC guidelines for their insulation and respective U value. Energy modeling exercise will be conducted to determine the insulation level acceptable as per the code.
xxxviii.	**The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.**	Yes, building will be constructed in such a way that adequate distance between them allow movement of fresh air and passage of light to the residential premises.
xxxix.	**Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.**	There will be regular supervision by site engineers throughout the construction phase to avoid disturbance to the surrounding.
xl.	**Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has**	Yes, Environmental Clearance is obtained vide no. SIA/MH/MIS/153429/2020 dated 08.07.2020. The copy of the same is attached as **Annexure – II.**

	been started without obtaining environmental clearance.	
xli.	**Six monthly monitoring reports should be submitted to the Regional office MoEF, Bhopal with copy to this department and MPCB.**	Yes, six monthly compliance report will get submitted to Regional office MoEF&CC, Nagpur & MPCB, Sion.
xlii.	**Project proponent shall ensure completion of STP, MSW disposal facility, green belt development prior to occupation of the buildings. As agreed during the SEIAA meeting, PP to explore possibility of utilizing excess treated water in the adjacent area for gardening before discharging it into sewer line No physical occupation or allotment will be given unless all above said environmental infrastructure is installed and made functional including water requirement in Para 2. Prior certification from appropriate authority shall be obtained.**	Yes, all the facilities will be in place prior to occupation of the building. We will ensure completion of STP, MSW disposal facility, green belt development prior to occupation of the buildings. We will check the possibility of utilizing excess treated water in the adjacent area for gardening before discharging it into sewer line. We ensure that, no physical occupation or allotment will be given unless all above said environmental infrastructure is installed and made functional including water requirement
xliii.	**Wet garbage should be treated by Organic Waste Converter and treated waste (manure) should be utilized in the existing premises for gardening. And, no wet garbage will be disposed outside the premises. Local authority should ensure this.**	Yes, the wet garbage will get treated in OWC and manure obtained will be used for Plantation/Landscaping.
xliv.	**Local body should ensure that no occupation certification is issued prior to operation of STP/MSW site etc. with due permission of MPCB.**	No occupation certification is issued prior to operation of STP/MSW site etc. with due permission of MPCB.

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xlv.	**A complete set of all the documents submitted to Department should be forwarded to the Local authority and MPCB.**	Yes, a complete set of all the documents submitted to Department is forwarded to the MPCB.
xlvi.	**In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Department.**	Yes, the condition is noted.
xlvii.	**A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.**	Yes, a separate environment management cell with qualified staff will be in place.
xlviii.	**Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item-wise breaks-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should reported to the MPCB & this department.**	The funds allocated for implementation of environmental protection measures are as follows: **a) Construction Phase:** Rs. 43.65 Lacs **b) Operation Phase:** 1. Capital cost: Rs. 299.37 Lacs 2. O& M Cost: Rs. 50.31 Lacs/annum
xlix.	**The project management shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the Marathi language of the local. concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the**	Yes, we have published advertisements in two local newspapers. Copy of same is attached as **Annexure – XII.**

	Maharashtra Pollution Control Board and may also be seen at Website at http://parivesh.nic.in	
l.	**Project management should submit half yearly compliance reports in respect of the stipulated prior environment clearance terms and conditions in hard & soft copies to the MPCB & this department, on 1St June & 1st December of each calendar year.**	Noted & will be complied with.
li.	**A copy of the clearance letter shall be sent by proponent to the concerned Municipal Corporation and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.**	Yes, the said condition is complied.
lii.	**The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCR and the SPCB. The criteria pollutant levels namely, SPM, RSPM. S02, NOx (ambient levels as well as stack emissions) or critical sector parameters. indicated for the project shall be monitored and displayed at a convenient**	Regular monitoring is being carried out and the results of the same are submitted to the concerned authority along with the report. Monitoring reports are enclosed as **Annexure - I.**

	location near the main gate of the company in the public domain.	
liii.	**The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies: as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.**	Six monthly compliance reports and monitoring data are being submitted to concerned authorities regularly.
liv.	**The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.**	Noted & agreed.
4.	**The environmental clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the**	Noted & agreed.

	case filed against him, if any or action initiated under EP Act.	
5.	**In case of submission of false document and non-compliance of stipulated conditions, Authority! Environment Department will revoke or suspend the Environment clearance without any intimation and initiate appropriate legal act on under Environmental Protection Act, 1986.**	Noted & agreed.
6.	**The Environment department reserves the right to add any stringent condition or to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.**	Noted & agreed.
7.	**Validity of Environment Clearance: The environmental clearance accorded shall be valid as per ETA Notification, 2006, amended time to time.**	Noted & agreed.
8.	**In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.**	Noted & agreed.

ARIHANT CONSTRUCTION CO.

9.	**The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.**	Noted & agreed.
10.	**Any appeal against this Environment clearance shall lie with the National Green Tribunal (Western Zone Bench, Pune). New Administrative Building, 1St Floor. D-Wing, Opposite Council Hall, Pune, if preferred. within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.**	Noted & agreed.

List of Annexures

Annexure no.	Particulars
Annexure - I	Post monitoring report
Annexure – II	Environmental Clearance
Annexure - III	Approved plan
Annexure- IV	CER letter submitted to MCGM
Annexure -V	High Rise NOC
Annexure -VI	OC Certificates
Annexure -VII	Consent to Establish
Annexure -VIII	Photographs showing facilities to Construction workers
Annexure -IX	Landscape plan for greenbelt development
Annexure -X	Plans showing RWH system & Storm water management
Annexure -XI	Energy Conservation Report
Annexure -XII	Advertisement

ADITYA ENVIRONMENTAL SERVICES PVT. LTD.
Testing Laboratory is certified by **ISO 9001:2015&ISO 45001:2018**
"Recognized under The Environment (Protection) Act, 1986" valid up to 24.04.2027
Laboratory: P-1, MIDC Mohopada, Rasayani, Dist. Raigad, 410222, E-mail: pglab@aespl.co.in
Tel: 9112844844, **CIN**: U74999MH2001PTC132101 **UDYAM**-MH-19-0029787
TC-7085

Test Report
(Ambient Air)

Ref. No.: AESPL/LAB/C/ A-25/11/84 **Issue Date:** 28/11/2025

Name of Customer & Contact details	:	Arihant Construction Co			
Name of Site	:	Rehab No. CTSNo.669 (pt), CTS No.669/1 to 35 & 670, 610, 610/1 to 26, 666 and CTS, No. 673, 673/1 to 7, "T' Ward of MCGM, Gopal Krishna Gokhale Road, Mulund (E), Mumbai — 400081			
Location of Sampling	:	Near Tower -02			
Date of Sampling	:	18/11/2025			
Sampling Time	:	09:10 to 05:10 hr.	**Duration**	:	8 Hr.
Sample Drawn By	:	ACD	**Transported By**	:	ACD
Date of Sample Receipt	:	22/11/2025	**Sample Identification**	:	A-25/11/84
Sample Quantity & Container	:	SO_2:1 Bottle; NO_2:1 Bottle; PM_{10}-1; $PM_{2.5}$-1; Bladder:1			
Date of Sample Analysis	:	22/11/2025 to 27/11/2025			
Sampling Environmental Conditions	:	Temperature:27-30°C; Rain fall: No; P_{bar}: 756 mmHg.			
Transportation Condition	:	Bottles < 5°C	Filter papers in plastic	Bladder at ambient temp.	
Sampling Equipment	:	RDS-I-12 & FDS-I-12			
Calibration Status	:	Calibration on 24/05/2025 due on 23/05/2026			
Project/ Job number	:	ACC/RE-S/20/24-25 dt 08.05.24			
Reference of Sampling	:	AESPL/LAB/QR/7.3.3/R-03			
Method of Sampling & Preservation	:	AESPL/LAB/SOP/7.3.1/A-01			
Environmental Condition while Testing	:	Ambient Temperature: 28.3°C and Humidity: 49%			

Sr. No.	Parameter	Result	Limits	Unit	Method of Analysis
1.	Sulphur dioxide as SO_2	21.4	80 *	µg/m³	IS 5182 (Part 2/Sec 1)
2.	Nitrogen dioxide as NO_2	30.7	80 *	µg/m³	IS 5182 (Part 6)
3.	PM_{10}	79.3	100 *	µg/m³	IS 5182 (Part 23)
4.	$PM_{2.5}$	25.0	60 *	µg/m³	IS 5182 (Part 24)
5.	Carbon monoxide as CO	0.62	04 **	mg/m³	IS 5182 (part 10)

[#] Specified under National Ambient Air Quality Standards by CPCB:
[*] 24 hourly monitoring values; [**] 1 hourly monitoring values.

Conformity Statement: The monitoring undertaken indicates that Ambient Air Quality Values for monitored parameters are within the levels stipulated under National Ambient Air Quality Standards (NAAQS)2009.

Note:

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2. Results relate only to the items tested.
3. Any query related to this report will be entertained within 15 days of the report issue date only.
4. The results apply to the sample as received.

ADITYA ENVIRONMENTAL SERVICES PVT. LTD. RASAYANI

Himani

Himani P. Joshi
(Report Reviewed By)

RSpatil

Reshma S. Patil.
(Authorized Signatory)

-End of Test Report-

ADITYA ENVIRONMENTAL SERVICES PVT. LTD.
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Tel: 9112844844, **CIN**: U74999MH2001PTC132101 **UDYAM**-MH-19-0029787
TC-7085

Test Report
(Microbiology – Water)

Ref. No.: AESPL/LAB/B/Mw-25/11/193 **Issue Date:** 26/11/2025

Name of Customer	:	Arihant Construction Co			
Name of Site	:	Rehab No. CTSNo.669 (pt), CTS No.669/1 to 35 & 670, 610, 610/1 to 26, 666 and CTS, No. 673, 673/1 to 7, "T' Ward of MCGM, Gopal Krishna Gokhale Road, Mulund (E), Mumbai — 400081			
Nature of Sample	:	Drinking water	**Location of Sample**	:	
Date of Sample Drawn	:	18/11/2025	**Time of Sample Drawn**	:	11:15 am
Sample Drawn By	:	ACD	**Transported By**	:	ACD
Date of Sample Receipt	:	22/11/2025	**Sample Identification**	:	Mw- 25/11/193
Sample Quantity & Container	:	250 ml; Glass bottle			
Date of Sample Analysis	:	22/11/2025 to 24/11/2025			

Environmental Conditions at site	:	Surrounding area is clean
Transportation Condition	:	Water Temperature: < 6°C, Cold storage.
Project/ Job number	:	ACC/RE-S/20/24-25 dt 08.05.24
Reference of Sampling	:	AESPL/LAB/QR/7.3.3/R-03
Method of Sampling & Preservation	:	AESPL/LAB/SOP/7.3.1/M-01
Environmental Condition while Testing	:	Ambient Temperature: 23.8°C and Humidity: 55 %

Sr. No.	**Parameter, Unit**	**Result**	**Limits as per: IS 10500:2012**	**Method of Analysis**
1.	Coliform/100ml	Absent /100ml	Absent /100ml	IS:15185:2016
2.	E-coli/100ml	Absent /100ml	Absent/100ml	IS:15185:2016

Conformity Statement: Water sample is **Pass** as per IS 10500: 2012 w. r. t. above mentioned tests.

Note:

1. The test report shall not be reproduced except in full, without written approval of laboratory.
2. Results relate only to the items tested.
3. The results apply to the sample as received.

ADITYA ENVIRONMENTAL SERVICES PVT. LTD. RASAYANI

Himani P. Joshi
(Report Reviewed By)

N. K Shendye
(Authorized Signatory)

-End of Test Report-

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Tel: 9112844844, **CIN**: U74999MH2001PTC132101 **UDYAM**-MH-19-0029787

TC-7085

Test Report
(Noise)

Ref. No.: AESPL/LAB/C/ N-25/11/88 **Issue Date:** 26/11/2025

Name of Customer & Contact Details	:	Arihant Construction Co.			
Name of Site	:	Rehab No. CTSNo.669 (pt), CTS No.669/1 to 35 & 670, 610, 610/1 to 26, 666 and CTS, No. 673, 673/1 to 7, "T' Ward of MCGM, Gopal Krishna Gokhale Road, Mulund (E), Mumbai 400081			
Location Details	:	At the Periphery of Site			
Date of Sampling	:	18/11/2025	**Period of Sampling**	:	Spot
Start Time of Sampling	:	10:00Hr.	**End Time of Sampling**	:	10:40 hr.
Monitored By	:	ACD	**Transported By**	:	ACD
Date of Data Receipt	:	22/11/2025	**Sample Identification**	:	N-25/11/88
Environmental Condition	:	**Climate:** Clear	**Ambient Temp:** 28^{0}C		
Transportation Condition	:	Noise Data sheet is kept in folder and safely transported to laboratory along with Noise meter.			
Sampling Equipment	:	Noise meter - Centre C-390 SL-I-08			
Calibration Status	:	Calibrated on 04/12/2024; calibration due on 03/12/2025			
Project/ Job Number	:	ACC/RE-S/20/24-25 dt 08.05.24			
Reference of Sampling	:	AESPL/LAB/QR/7.3.3/R-03			
Method of Sampling	:	IS 9989			

Sr. No.	**Location**	**Noise Day Time dB(A)**
1.	Near Main Gate	53.8
2.	Near Steel Yard	52.5
3.	Near Concrete Pump	53.6
4.	Near Hari Hareshwar Society	54.6
5.	Near MLCP	52.9
6.	Near Tower 02	53.5
7.	Near Tower 01	54.1
8.	Near Store Room	54.7
9.	Near Labour Camp	53.7
10.	Near Lodha Sales Office	51.9
Limit as per EP Act for Residential area		**55**

Conformity Statement: Noise Levels at all locations are found below the stipulated limits.

Note:

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3. Any query related to this report will be entertained within 15 days of the report issue date only and the sample will also be retained for the same period.
4. Results apply as data received.

ADITYA ENVIRONMENTAL SERVICES PVT. LTD. RASAYANI

Himani

Himani P. Joshi.
(Report Reviewed By)

Rspatil

Reshma S. Patil.
(Authorized Signatory)

-End of Test Report-

ADITYA ENVIRONMENTAL SERVICES PVT. LTD.
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TC-7085

Test Report
(Water)

Ref. No.: AESPL/LAB/C/W-25/11/226 **Issue Date:** 26/11/2025

Name of Customer & Contact Details	:	Arihant Construction Co.			
Name of Site	:	Rehab No. CTSNo.669 (pt), CTS No.669/1 to 35 & 670, 610, 610/1 to 26, 666 and CTS, No. 673, 673/1 to 7, "T' Ward of MCGM, Gopal Krishna Gokhale Road, Mulund (E), Mumbai 400081			
Nature of Sample	:	Drinking water	**Location of Sample**	:	Labour Colony
Date of Sample Drawn	:	18/11/2025	**Time of Sample Drawn**	:	11.15 am
Sample Drawn By	:	ACD	**Transported By**	:	ACD
Date of Sample Receipt	:	22/11/2025	**Sample Identification**	:	W- 25/11/226
Sample Quantity & Container	:	F-1 lit; Plastic can.			
Date of Sample Analysis	:	22/11/2025 to 24/11/2025			
Environmental Conditions at site	:	Water Temperature: 23°C, Air Temperature:28°C, Water tap and surrounding was clean.			
Transportation Condition	:	Water Temperature: < 6°C, Cold storage.			
Project/ Job number	:	ACC/RE-S/20/24-25 dt 08.05.24			
Reference of Sampling	:	AESPL/LAB/QR/7.3.3/R-03			
Method of Sampling & Preservation	:	AESPL/LAB/SOP/7.3.1/W-01			
Environmental Condition while Testing	:	Ambient Temperature: 28.6°C and Humidity: 42%			

Sr. No.	Parameter	Result	Limits (IS 10500:2012)		Method of Analysis
			Acceptable	Permissible	
1.	pH @ 25°C	6.8	6.5 – 8.5	No relaxation	IS-3025(P-11)
2.	Chlorides as Cl^-, mg/l	15	250 Max	1000 Max	IS-3025(P-32)
3.	Hardness as $CaCO_3$, mg/l	50	200 Max	600 Max	IS-3025(P-21)
4.	Total Dissolved Solids @ 180°C, mg/l	80	500 Max	2000 Max	IS-3025(P-16)
5.	Sulphate as SO_4^{-2}, mg/l	<5.0	200 Max	400 Max	IS-3025(P-24)
6.	Iron as Fe, mg/l	0.032	0.3 Max	No relaxation	IS-3025(P-53)
7.	Fluoride as F^-, mg/l	0.30	1.0 Max	1.5 Max	IS-3025(P-60)
8.	Conductivity@25°C, µmhos/cm	120	--	--	IS-3025(P-14)
9.	Turbidity, NTU	< 1.0	1 Max	5 Max	IS-3025(P-10)
10.	Residual Chlorine, mg/l	0.4	0.2 Min	1.0 Min	IS-3025(P-26)

Conformity Statement: Water sample is **pass** as per IS 10500:2012 w.r.t. above mentioned tests

Note:

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3. Any query related to this report will be entertained within 15 days of the report issue date only and the sample will also be retained for the same period.
4. The results apply to the sample as received.

ADITYA ENVIRONMENTAL SERVICES PVT. LTD. RASAYANI

Himani

Himani P. Joshi.
(Report Reviewed By)

RSpatil

Reshma S. Patil.
(Authorized Signatory)

-End of Test Report-

ADITYA ENVIRONMENTAL SERVICES PVT. LTD.
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Tel: 9112844844, **CIN**: U74999MH2001PTC132101 **UDYAM**-MH-19-0029787

TC-7085

Test Report
(Ambient Air)

Ref. No.: AESPL/LAB/C/ A-26/02/102 **Issue Date:** 06/03/2026

Name of Customer & Contact details	:	Arihant Construction Co			
Name of Site	:	Rehab No. CTSNo.669 (pt), CTS No.669/1 to 35 & 670, 610, 610/1 to 26, 666 and CTS, No. 673, 673/1 to 7, "T' Ward of MCGM, Gopal Krishna Gokhale Road, Mulund (E), Mumbai — 400081			
Location of Sampling	:	Near Tower -02			
Date of Sampling	:	19/02/2026			
Sampling Time	:	09:00 to 05:00 hr.	**Duration**	:	8 Hr.
Sample Drawn By	:	ACD	**Transported By**	:	ACD
Date of Sample Receipt	:	25/02/2026	**Sample Identification**	:	A-25/02/102
Sample Quantity & Container	:	SO_2:1 Bottle; NO_2:1 Bottle; PM_{10}-1; $PM_{2.5}$-1; Bladder:1			
Date of Sample Analysis	:	25/02/2026 to 05/03/2026			
Sampling Environmental Conditions	:	Temperature:27-30°C; Rain fall: No; P_{bar}: 756 mmHg.			
Transportation Condition	:	Bottles < 5°C	Filter papers in plastic container	Bladder at ambient temp.	
Sampling Equipment	:	RDS-I-12 & FDS-I-12			
Calibration Status	:	Calibration on 24/05/2026 due on 23/05/2026			
Project/ Job number	:	ACC/RE-S/20/24-25 dt 08.05.24			
Reference of Sampling	:	AESPL/LAB/QR/7.3.3/R-03			
Method of Sampling & Preservation	:	AESPL/LAB/SOP/7.3.1/A-01			
Environmental Condition while Testing	:	Ambient Temperature: 28.3°C and Humidity: 49%			

Sr. No.	Parameter	Result	Limits	Unit	Method of Analysis
1.	Sulphur dioxide as SO_2	26.1	80 *	µg/m³	IS 5182 (Part 2/Sec 1)
2.	Nitrogen dioxide as NO_2	35.4	80 *	µg/m³	IS 5182 (Part 6)
3.	PM_{10}	83.6	100 *	µg/m³	IS 5182 (Part 23)
4.	$PM_{2.5}$	31.2	60 *	µg/m³	IS 5182 (Part 24)
5.	Carbon monoxide as CO	0.72	04 **	mg/m³	IS 5182 (part 10)

[#] Specified under National Ambient Air Quality Standards by CPCB:
[*] 24 hourly monitoring values; [**] 1 hourly monitoring values.

Conformity Statement: The monitoring undertaken indicates that Ambient Air Quality Values for monitored parameters are within the levels stipulated under National Ambient Air Quality Standards (NAAQS)2009.

Note:

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2. Results relate only to the items tested.
3. Any query related to this report will be entertained within 15 days of the report issue date only.
4. The results apply to the sample as received.

ADITYA ENVIRONMENTAL SERVICES PVT. LTD. RASAYANI

Himani P. Joshi
(Report Reviewed By)

Reshma S. Patil.
(Authorized Signatory)

-End of Test Report-

ADITYA ENVIRONMENTAL SERVICES PVT. LTD.
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TC-7085

Test Report
(Microbiology – Water)

Ref. No.: AESPL/LAB/B/Mw-26/02/224 **Issue Date:** 23/02/2026

Name of Customer	:	Arihant Construction Co.			
Name of Site	:	Rehab No. CTSNo.669 (pt), CTS No.669/1 to 35 & 670, 610, 610/1 to 26, 666 and CTS, No. 673, 673/1 to 7, "T' Ward of MCGM, Gopal Krishna Gokhale Road, Mulund (E), Mumbai — 400081			
Nature of Sample	:	Drinking water	**Location of Sample**	:	Labour Colony
Date of Sample Drawn	:	19/02/2026	**Time of Sample Drawn**	:	09:50 Am
Sample Drawn By	:	ACD	**Transported By**	:	ACD
Date of Sample Receipt	:	19/02/2026	**Sample Identification**	:	Mw-26/02/224
Sample Quantity & Container	:	250 ml; Glass bottle.			
Date of Sample Analysis	:	19/02/2026 to 20/02/2026			

Environmental Conditions at site	:	Surrounding area is clear.
Transportation Condition	:	Water Temperature: < 6°C, Cold storage.
Project/ Job number	:	ACC/RE-S/20/24-25 dt 08.05.24
Reference of Sampling	:	AESPL/LAB/QR/7.3.3/R-03
Method of Sampling & Preservation	:	AESPL/LAB/SOP/7.3.1/M-01
Environmental Condition while Testing	:	Ambient Temperature: 23.4°C and Humidity: 55 %

Sr. No.	Parameter, Unit	Result	Limits as per: IS 10500:2012	Method of Analysis
1.	Coliform/100ml	Absent /100ml	Absent /100ml	IS:15185:2016
2.	E-coli/100ml	Absent /100ml	Absent/100ml	IS:15185:2016

Conformity Statement: Water sample is **Pass** as per IS 10500:2012 w. r. t. above mentioned tests.

Note:

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2. Results relate only to the items tested.
3. Data provided by customer and results apply to the sample as received.

ADITYA ENVIRONMENTAL SERVICES PVT. LTD. RASAYANI

Himani P. Joshi
(Report Reviewed By)

N. K Shendye
(Authorized Signatory)

-End of Test Report-

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TC-7085

Test Report
(Noise)

Ref. No.: AESPL/LAB/C/ N-26/02/109 **Issue Date:** 28/02/2026

Name of Customer & Contact Details	:	Arihant Construction Co.			
Name of Site	:	Rehab No. CTSNo.669 (pt), CTS No.669/1 to 35 & 670, 610, 610/1 to 26, 666 and CTS, No. 673, 673/1 to 7, "T' Ward of MCGM, Gopal Krishna Gokhale Road, Mulund (E), Mumbai 400081			
Location Details	:	At the Periphery of Site			
Date of Sampling	:	19/02/2026	**Period of Sampling**	:	Spot
Start Time of Sampling	:	09:30Hr.	**End Time of Sampling**	:	10:00 hr.
Monitored By	:	ACD	**Transported By**	:	ACD
Date of Data Receipt	:	25/02/2026	**Sample Identification**	:	N-26/02/109
Environmental Condition	:	**Climate:** Clear	**Ambient Temp:** 28^{0}C		
Transportation Condition	:	Noise Data sheet is kept in folder and safely transported to laboratory along with Noise meter.			
Sampling Equipment	:	Noise meter - Centre C-390 SL-I-08			
Calibration Status	:	Calibrated on 03/12/2025; calibration due on 02/12/2026			
Project/ Job Number	:	ACC/RE-S/20/24-25 dt 08.05.24			
Reference of Sampling	:	AESPL/LAB/QR/7.3.3/R-03			
Method of Sampling	:	IS 9989			

Sr. No.	**Location**	**Noise Day Time dB(A)**
1.	Near Main Gate	63.4
2.	Near Steel Yard	64.5
3.	Near Concrete Pump	64.4
4.	Near Hari Hareshwar Society	62.3
5.	Near MLCP	63.8
6.	Near Tower 02	62.9
7.	Near Tower 01	64.0
8.	Near Store Room	63.6
9.	Near Labour Camp	62.5
10.	Near Lodha Sales Office	64.2
Limit as per EP Act for Commercial area		**65**

Conformity Statement: Noise Levels at all locations are found below the stipulated limits.

Note:
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3. Any query related to this report will be entertained within 15 days of the report issue date only and the sample will also be retained for the same period.
4. Data provided by a customer, the results apply to the data as received.

ADITYA ENVIRONMENTAL SERVICES PVT. LTD. RASAYANI

Himani P. Joshi.
(Report Reviewed By)

Reshma S. Patil.
(Authorized Signatory)

-End of Test Report-

ADITYA ENVIRONMENTAL SERVICES PVT. LTD.

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Tel: 9112844844, **CIN**: U74999MH2001PTC132101 **UDYAM**-MH-19-0029787

TC-7085

Test Report
(Soil)

Ref. No.: AESPL/LAB/C/S-26/02/15 **Issue Date:** 26/02/2026

Name of Customer & contact details	:	Arihant Construction Co. (Baya Co. & Lodha Developers)			
Name of Site	:	Rehab No. CTSNo.669 (pt), CTS No.669/1 to 35 & 670, 610, 610/1 to 26, 666 and CTS, No. 673, 673/1 to 7, "T' Ward of MCGM, Gopal Krishna Gokhale Road, Mulund (E), Mumbai — 400081			
Nature of Sample	:	Cultivated soil	**Location of Sample**	:	MLCP Near marble Cutting Machine
Date of Sample Drawn	:	19/02/2026	**Time of Sample Drawn**	:	10:00 am
Sample Drawn By	:	ACD	**Transported By**	:	ACD
Date of Sample Receipt	:	19/02/2026	**Sample Identification**	:	S-26/02/15
Sample Quantity & Container	:	1kg; PG bag			
Date of Sample Analysis	:	19/02/2026 to 26/02/2026			
Environmental Conditions at site	:	**Area**: Clean, **Colour**: Brown			
Transportation Condition	:	Kept soil in polythene bag in a dry place			
Project/ Job number	:	ACC/RE-S/20/24-25 dt 08.05.24			
Reference of Sampling	:	AESPL/LAB/QR/7.3.3/R-03			
Method of Sampling & Preservation	:	AESPL/LAB/SOP/7.3.1/S-01			
Environmental Condition while Testing	:	Ambient Temperature: 29.2°C and Humidity: 52 %			

Sr.	Parameter with Unit	Result		Method of analysis
1.	pH@ 25°C	7.82		IS 2720 (part 26)
2.	Water content, %	24.5		IS 2720 (part 2)
3.	Organic Carbon, %	0.68		IS 2720 (part 22)
4.	Total Kjeldhal Nitrogen, %	0.14		AESPL/LAB/SOP/7.2.1.2/S-24; 01.07.22
5.	Potassium as K, kg/ha	70		AESPL/LAB/SOP/7.2.1.2/S-06; 01.07.22
6.	Available Sulphur, mg/kg	22.6		Soil Testing in India Ministry of Agriculture, Government of India, January
7.	Available Phosphorus, kg/ha	354		
8.	Chloride, mg/l	24.8		
9.	Lead as Pb, mg/kg	0.08		EPA Method 3050 B.2
10.	Texture, %	Coarse	15	AESPL/LAB/SOP/7.2.1.2/S-17; 01.07.22
		Clay	34	
		Silt	27	
		Fine sand	24	

Note:

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2. Results relate only to the items tested.
3. Any query related to this report will be entertained within 15 days of the report issue date only and the sample will also be retained for the same period.
4. Data provided by a customer, the results apply to the sample as received.

ADITYA ENVIRONMENTAL SERVICES PVT. LTD. RASAYANI

Sushma A. Gujar.
(Authorized Signatory)

Himani P. Joshi.
(Report Reviewed By)

-End of Test Report-

ADITYA ENVIRONMENTAL SERVICES PVT. LTD.
Testing Laboratory is certified by **ISO 9001:2015&ISO 45001:2018**
"Recognized under The Environment (Protection) Act, 1986" valid up to 24.04.2027
Laboratory: P-1, MIDC Mohopada, Rasayani, Dist. Raigad, 410222, E-mail: pglab@aespl.co.in
Tel: 9112844844, **CIN**: U74999MH2001PTC132101 **UDYAM**-MH-19-0029787

Test Report
(Soil)

Ref. No.: AESPL/LAB/C/S-26/02/15A **Issue Date:** 26/02/2026

Name of Customer & contact details	:	Arihant Construction Co. (Baya Co. & Lodha Developers)			
Name of Site	:	Rehab No. CTSNo.669 (pt), CTS No.669/1 to 35 & 670, 610, 610/1 to 26, 666 and CTS, No. 673, 673/1 to 7, "T' Ward of MCGM, Gopal Krishna Gokhale Road, Mulund (E), Mumbai — 400081			
Nature of Sample	:	Cultivated soil	**Location of Sample**	:	MLCP Near marble Cutting Machine
Date of Sample Drawn	:	19/02/2026	**Time of Sample Drawn**	:	10:00 am
Sample Drawn By	:	ACD	**Transported By**	:	ACD
Date of Sample Receipt	:	19/02/2026	**Sample Identification**	:	S-26/02/15
Sample Quantity & Container	:	1kg; PG bag			
Date of Sample Analysis	:	19/02/2026 to 26/02/2026			
Environmental Conditions at site	:	**Area**: Clean, **Colour**: Brown			
Transportation Condition	:	Kept soil in polythene bag in a dry place			
Project/ Job number	:	ACC/RE-S/20/24-25 dt 08.05.24			
Reference of Sampling	:	AESPL/LAB/QR/7.3.3/R-03			
Method of Sampling & Preservation	:	AESPL/LAB/SOP/7.3.1/S-01			
Environmental Condition while Testing	:	Ambient Temperature: 29.2°C and Humidity: 52 %			

Sr.	Parameter with Unit	Result	Method of analysis
11.	Silica as SiO_2, mg/kg	< 0.8	EPA Method 3050 B.2
12.	Arsenic as As, mg/kg	<0.02	EPA Method 3050 B.2

Note:

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4. Data provided by a customer, the results apply to the sample as received.

ADITYA ENVIRONMENTAL SERVICES PVT. LTD. RASAYANI

Sushma A. Gujar.
(Authorized Signatory)

Himani P. Joshi.
(Report Reviewed By)

-End of Test Report-

ADITYA ENVIRONMENTAL SERVICES PVT. LTD.
Testing Laboratory is certified by **ISO 9001:2015&ISO 45001:2018**
"Recognized under The Environment (Protection) Act, 1986" valid up to 24.04.2027
Laboratory: P-1, MIDC Mohopada, Rasayani, Dist. Raigad, 410222, E-mail: pglab@aespl.co.in
Tel: 9112844844, **CIN**: U74999MH2001PTC132101 **UDYAM**-MH-19-0029787

TC-7085

Test Report
(Water)

Ref. No.: AESPL/LAB/C/W-26/02/237 **Issue Date:** 23/02/2026

Name of Customer & Contact Details	:	Arihant Construction Co.			
Name of Site	:	Rehab No. CTSNo.669 (pt), CTS No.669/1 to 35 & 670, 610, 610/1 to 26, 666 and CTS, No. 673, 673/1 to 7, "T' Ward of MCGM, Gopal Krishna Gokhale Road, Mulund (E), Mumbai 400081			
Nature of Sample	:	Drinking water	**Location of Sample**	:	Labour Colony
Date of Sample Drawn	:	19/02/2026	**Time of Sample Drawn**	:	9.50 pm
Sample Drawn By	:	ACD	**Transported By**	:	ACD
Date of Sample Receipt	:	19/02/2026	**Sample Identification**	:	W- 26/02/237
Sample Quantity & Container	:	F-1 lit; Plastic can.			
Date of Sample Analysis	:	19/02/2026 to 21/02/2026			
Environmental Conditions at site	:	Water Temperature: 20°C, Air Temperature:28°C, Water tap and surrounding was clean.			
Transportation Condition	:	Water Temperature: < 6°C, Cold storage.			
Project/ Job number	:	ACC/RE-S/20/24-25 dt 08.05.24			
Reference of Sampling	:	AESPL/LAB/QR/7.3.3/R-03			
Method of Sampling & Preservation	:	AESPL/LAB/SOP/7.3.1/W-01			
Environmental Condition while Testing	:	Ambient Temperature: 29.6°C and Humidity: 48%			

Sr. No.	Parameter	Result	Limits (IS 10500:2012)		Method of Analysis
			Acceptable	Permissible	
1.	pH @ 25°C	8.2	6.5 – 8.5	No relaxation	IS-3025(P-11)
2.	Chlorides as Cl^-, mg/l	16	250 Max	1000 Max	IS-3025(P-32)
3.	Hardness as $CaCO_3$, mg/l	60	200 Max	600 Max	IS-3025(P-21)
4.	Total Dissolved Solids @ 180°C, mg/l	90	500 Max	2000 Max	IS-3025(P-16)
5.	Sulphate as SO_4^{-2}, mg/l	<5.0	200 Max	400 Max	IS-3025(P-24)
6.	Iron as Fe, mg/l	0.034	0.3 Max	No relaxation	IS-3025(P-53)
7.	Fluoride as F^-, mg/l	0.32	1.0 Max	1.5 Max	IS-3025(P-60)
8.	Conductivity@25°C, µmhos/cm	146	--	--	IS-3025(P-14)
9.	Turbidity, NTU	< 1.0	1 Max	5 Max	IS-3025(P-10)
10.	Residual Chlorine, mg/l	0.4	0.2 Min	1.0 Min	IS-3025(P-26)

Conformity Statement: Water sample is **pass** as per IS 10500:2012 w.r.t. above mentioned tests

Note:

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2. Results relate only to the items tested.
3. Any query related to this report will be entertained within 15 days of the report issue date only and the sample will also be retained for the same period.
4. The results apply to the sample as received.

Himani

ADITYA ENVIRONMENTAL SERVICES PVT. LTD. RASAYANI

RSpatil

Himani P. Joshi.
(Report Reviewed By)

Reshma S. Patil.
(Authorized Signatory)

-End of Test Report-

STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY

No. SIA/MH/MIS/153429/2020
Environment Department
Room No. 217, 2nd Floor,
Mantralaya,
Mumbai- 400032.
Date: 08.07.2020.

To
M/s. ARIHANT CONSTRUCTION COMPANY.,
CTS No.669 (pt), CTS No.669/1 to 35 & 670,
610, 610/1 to 26, 666 and CTS No.673,
673/1 to 7, "T' Ward of MCGM,
Gopal Krishna Gokhale Road,
Mulund (E), Mumbai – 400081.

Subject : Environment Clearance for Proposed Slum rehabilitation Scheme at CTS No.669 (pt), CTS No.669/1 to 35 & 670, 610, 610/1 to 26, 666 and CTS No.673, 673/1 to 7, "T' Ward of MCGM, Gopal Krishna Gokhale Road, Mulund (E), Mumbai – 400081. By M/s. ARIHANT CONSTRUCTION COMPANY.

Reference : Application no. SIA/MH/MIS/153429/2020

This has reference to your communication on the above mentioned subject. The proposal was considered by the SEAC-2 in its 134th meeting under screening category 8 (a) as per EIA Notification, 2006 and recommend to SEIAA. Proposal then considered in 201st meeting of State Level Environment Impact Assessment Authority (SEIAA).

2. Brief Information of the project submitted by you is as below:-

1.	Plot Area	9,407.90 Sq.mt.
2.	FSI Area	54517.52 Sq.mt. (Including Fungible area)
3.	Non FSI Area	72,274.89
4.	Total Built up Area (FSI & Non FSI)	1,26,792.41
5.	Building Configuration	**Rehabilitation Building No.1:** Ground + 7 Floors Rehab Residential: 57 nos. Rehab Commercial (Shops): 4 nos. Rehab R/C: 2 nos. Welfare Center: 1 no. Balwadi: 1 no. Temple: 2 nos. **Composite Building No.2:** Ground + 23 Floors Rehab Residential: 108 nos. Tenements for Existing Apartment Owners: 4 nos. Commercial Units: 9 nos. Amenity office: 1 no. Society Office: 1 no. Amenity: 2 nos. **Sale Building No.3 (Tower A & Tower B):** 2 Basements + Stilt +1st to 10th Level Podium + 11th Level Open to Sky Podium for Amenities + 12th to 53rd upper floors Tenements for Existing Apartment Owners: 9 Nos. Flats: 483 nos. Fitness Center: 1 no. Society Office: 1 no. **Composite Building No.4 (Wing A, Wing B & Wing C):** 2 Basements + Ground + 23 Floors Rehab Residential: 78 nos.

		Tenements for Existing Apartment Owners: 40 nos. Sale Flats: 149 nos. MCGM Reservation: 8 nos. Fitness Center: 1 no. Society Office: 2 nos.
6.	Total Population	4512 Nos.
7.	Water Requirement	610 KLD
8.	Sewage generation	522 KLD
9.	STP capacity and Technology	3 STPs of total capacity 580 KL Technology: MBBR (Moving Bed Bio Reactor)
10.	STP location	**Building Configuration** **Location** Rehabilitation Building No.1: Below ground Composite Building No.2: Sale Building No.3: Basement Composite Building No.4: Basement
11.	RG area required and Provided	RG area requirement: 751.54 Sq.mt. (8%) RG area provision on ground: 785.55 Sq.mt.(8.36%)
	Energy requirement	Connected load : 4136 KW Maximum demand : 3308 KW
12.	Total Energy Saving	23%
	Energy saving by Solar	5 %
13.	No. of DG sets and capacity	Composite Building No.2 : 1 of 250 kVA Sale Building No.3: 3 of 500 kVA Composite Building No.4: 1 of 400 kVA
14.	Solid waste generation	Non-biodegradable waste: 1203 Kg/day Biodegradable waste : 799 Kg/day
15.	OWC Capacity	Area for solid waste management: 132.00 Sq.mt.
16.	Parking	4 Wheeler: 724 Nos. 2 Wheeler: 175 Nos.
17.	EMP Cost	**Construction Phase**: Rs.43.65 Lacs **Operation Phase**: Capital cost : Rs. 299.37 Lacs Operational and Maintenance cost : Rs. 50.31 Lacs/annum
18.	Rain water Harvesting	Provision of 5 RWH tank of total capacity 154 KL
19.	Number of recharge pits and sizes of the pits	Nil
20.	Details of UGT tanks – Number and capacity	Domestic: 667 KL Flushing: 213KL Firefighting: 600 KL
21.	CER	CER plan as per the MoEF& CC circular dated 01/05/2018 **Project Cost:** Rs. 291.87 Crores **Cost for CER:**Rs.2.91 Crores (0.75% of project cost)

3. The proposal has been considered by SEIAA in its 201st meeting and decided to accord Environment Clearance to the said project under the provisions of Environment Impact Assessment Notification, 2006 subject to implantation of following terms and conditions-

Specific Conditions:

i. PP informed that 2624.64 Sq. Meter constructions was carried out in 2006-07 by earlier PP. The potential of total Construction Area of the plot in 2006 was 19829.45 Sq. Meter including Non FSI area also. The Architect Certificate to that effect was also submitted by PP. PP to provide Environment infrastructure to the existing building which has got occupation certificate also.

ii. PP to ensure that STP to be kept open minimum up to 40%.The discharge of treated sewage to be reduced to 35% .

iii. PP to adopt water conservation measures by providing Low Flow Devices (LFD) as plumbing fixtures.
iv. PP to ensure that the energy savings from renewable sources shall be 5 %.
v. PP to provide Fire hydrant system fitted with all necessary Equipment's with a ladder to firemen at top of podium.
vi. PP to carryout shadow analysis by selecting Typical floors of all building at all directions & weighted average readings shall be considered for the same instead of average of minimum and maximum values.
vii. PP to have MOU with adjacent society of building no 4, which is on south side of plot, mentioning that 6 meter open space will be available between both the societies and no compound wall to be constructed by both the societies, as agreed by PP.
viii. PP to submit CER prescribed by MoEF&CC circular dated 1.5.2018 relevant to the area and people around the project. The specific activities to be undertaken under CER to be carried out in consultation with Municipal Corporation or collector or Environment Department.
ix. PP to submit HRC NOC, EC is restricted to 120 m height.
x. PP to ensure that CER plan gets approved from Municipal Commissioner.
xi. PP Shall comply with Standard EC conditions mentioned in the Office Memorandum issued by MoEF& CC vide F.No.22-34/2018-IA.III dt.04.01.2019.
xii. SEIAA decided to grant EC for – FSI: 54,517.52 m2, Non-FSI: 72,274.89 m2 and Total BUA: 1,26,792.41 m2 (Plan Approval no SRA/ENG/1715/T/PL/AP, dt. 21.01.2020, SRA/ENG/T/PVT/0040/20040928/AP/C- 2, dt. 21.01.2020 SRA/ENG/T/ PVT/0040/20040928/AP/S3 dt. 21.01.2020 SRA/ENG/T/PVT/0040/20040928/AP/C-4 dt.24.01.2020)

General Conditions:

i. E-waste shall be disposed through Authorized vendor as per E-waste (Management and Handling) Rules, 2016.
ii. The Occupancy Certificate shall be issued by the Local Planning Authority to the project only after ensuring sustained availability of drinking water, connectivity of sewer line to the project site and proper disposal of treated water as per environmental norms.
iii. This environmental clearance is issued subject to obtaining NOC from Forestry & Wild life angle including clearance from the standing committee of the National Board for Wild life as if applicable & this environment clearance does not necessarily implies that Forestry & Wild life clearance granted to the project which will be considered separately on merit.
iv. PP has to abide by the conditions stipulated by SEAC& SEIAA.
v. The height, Construction built up area of proposed construction shall be in accordance with the existing FSI/FAR norms of the urban local body & it should ensure the same along with survey number before approving layout plan & before according commencement certificate to proposed work. Plan approving authority should also ensure the zoning permissibility for the proposed project as per the approved development plan of the area.
vi. If applicable Consent for Establishment" shall be obtained from Maharashtra Pollution Control Board under Air and Water Act and a copy shall be submitted to the Environment department before start of any construction work at the site.
vii. All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.
viii. Adequate drinking water and sanitary facilities should be provided for construction workers at the site. Provision should be made for mobile toilets. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.
ix. The solid waste generated should be properly collected and segregated. Dry/inert solid waste should be disposed of to the approved sites for land filling after recovering recyclable material.
x. Disposal of muck during construction phase should not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
xi. Arrangement shall be made that waste water and storm water do not get mixed.
xii. All the topsoil excavated during construction activities should be stored for use in horticulture / landscape development within the project site.
xiii. Additional soil for levelling of the proposed site shall be generated within the sites (to the extent

possible) so that natural drainage system of the area is protected and improved.

xiv. Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Dept.

xv. Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.

xvi. Construction spoils, including bituminous material and other hazardous materials must not be allowed to contaminate watercourses and the dumpsites for such material must be secured so that they should not leach into the ground water.

xvii. Any hazardous waste generated during construction phase should be disposed of as per applicable rules and norms with necessary approvals of the Maharashtra Pollution Control Board.

xviii. The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environments (Protection) Rules prescribed for air and noise emission standards.

xix. The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from concern authority shall be taken.

xx. Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.

xxi. Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/MPCB.

xxii. Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September 1999 and amended as on 27th August, 2003. (The above condition is applicable only if the project site is located within the 100Km of Thermal Power Stations).

xxiii. Ready mixed concrete must be used in building construction.

xxiv. Storm water control and its re-use as per CGWB and BIS standards for various applications.

xxv. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.

xxvi. The ground water level and its quality should be monitored regularly in consultation with Ground Water Authority.

xxvii. The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the MPCB and Environment department before the project is commissioned for operation. Discharge of this unused treated affluent, if any should be discharge in the sewer line. Treated effluent emanating from STP shall be recycled/ refused to the maximum extent possible. Discharge of this unused treated affluent, if any should be discharge in the sewer line. Treatment of 100% grey water by decentralized treatment should be done. Necessary measures should be made to mitigate the odour problem from STP.

xxviii. Permission to draw ground water and construction of basement if any shall be obtained from the competent Authority prior to construction/operation of the project.

xxix. Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.

xxx. Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.

xxxi. Use of glass may be reduced up to 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.

xxxii. Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfil requirement.

xxxiii. Energy conservation measures like installation of CFLs /TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Use CFLs and TFLs should be properly collected and disposed of /sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible like installing solar street lights, common solar water heaters system. Project proponent should install, after checking feasibility, solar plus hybrid non-conventional energy source as source of energy.

xxxiv. Diesel power generating sets proposed as source of backup power for elevators and common

area illumination during operation phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use low sulphur diesel. The location of the DG sets may be decided with in consultation with Maharashtra Pollution Control Board.

xxxv. Noise should be controlled to ensure that it does not exceed the prescribed standards. During night-time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.

xxxvi. Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.

xxxvii. Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code, which is proposed to be mandatory for all air-conditioned spaces while it is aspiration for non-air-conditioned spaces by use of appropriate thermal insulation material to fulfil requirement.

xxxviii. The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.

xxxix. Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.

xl. Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining environmental clearance.

xli. Six monthly monitoring reports should be submitted to the Regional office MoEF, Bhopal with copy to this department and MPCB.

xlii. Project proponent shall ensure completion of STP, MSW disposal facility, green belt development prior to occupation of the buildings. As agreed during the SEIAA meeting, PP to explore possibility of utilizing excess treated water in the adjacent area for gardening before discharging it into sewer line No physical occupation or allotment will be given unless all above said environmental infrastructure is installed and made functional including water requirement in Para 2. Prior certification from appropriate authority shall be obtained.

xliii. Wet garbage should be treated by Organic Waste Converter and treated waste (manure) should be utilized in the existing premises for gardening. And, no wet garbage will be disposed outside the premises. Local authority should ensure this.

xliv. Local body should ensure that no occupation certification is issued prior to operation of STP/MSW site etc. with due permission of MPCB.

xlv. A complete set of all the documents submitted to Department should be forwarded to the Local authority and MPCB.

xlvi. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Department.

xlvii. A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.

xlviii. Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item-wise breaks-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should reported to the MPCB & this department.

xlix. The project management shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the Marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the Maharashtra Pollution Control Board and may also be seen at Website at http://parivesh.nic.in

l. Project management should submit half yearly compliance reports in respect of the stipulated prior environment clearance terms and conditions in hard & soft copies to the MPCB & this department, on 1st June & 1st December of each calendar year.

li. A copy of the clearance letter shall be sent by proponent to the concerned Municipal Corporation and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.

lii. The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO2, NOx (ambient levels as

well as stack emissions) or critical sector parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

liii. The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.

liv. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.

4. The environmental clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act.

5. In case of submission of false document and non-compliance of stipulated conditions, Authority/ Environment Department will revoke or suspend the Environment clearance without any intimation and initiate appropriate legal action under Environmental Protection Act, 1986.

6. The Environment department reserves the right to add any stringent condition or to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.

7. Validity of Environment Clearance: The environmental clearance accorded shall be valid as per EIA Notification, 2006, amended time to time.

8. In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.

9. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.

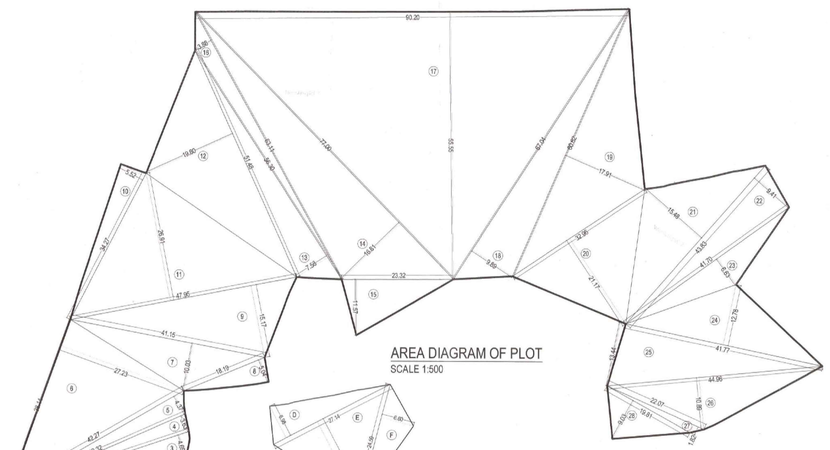
10. Any appeal against this Environment clearance shall lie with the National Green Tribunal (Western Zone Bench, Pune), New Administrative Building, 1st Floor, D-Wing, Opposite Council Hall, Pune, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Anil Diggikar
(Member Secretary, SEIAA)

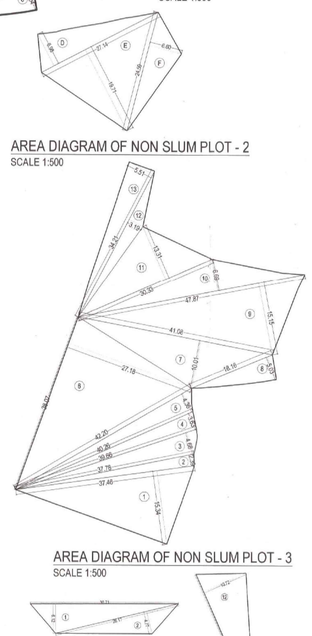
Copy to:

1. Shri Johny Joseph, Chairman,SEIAA.
2. Secretary, MoEF & CC
3. IA- Division MOEF & CC
4. Member Secretary, Maharashtra Pollution Control Board, Mumbai.
5. Regional Office MoEF & CC, Nagpur
6. District Collector, Mumbai Suburban.
7. Commissioner, Municipal Corporation of Greater Mumbai.
8. Regional Officer, Maharashtra Pollution Control Board, Mumbai.

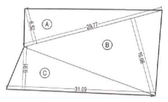
ANNEXURE III



AREA DIAGRAM OF PLOT
SCALE 1:500



AREA DIAGRAM OF NON SLUM PLOT - 2
SCALE 1:500



AREA DIAGRAM OF NON SLUM PLOT -1
SCALE 1:500

LAYOUT R.G AREA				
	PLOT AREA	REQUIRED 6% R.G	PROVIDED GROUND FLOOR	PROVIDED ECO DECK FLOOR
SLUM PLOT	9364.20	751.64	754.56	443.67
TOTAL	9364.20	751.64	1198.23	

R.G. AREA CALCULATION									
1	2/3	X	30.71	X	6.12	X 1 NO	=	93.97	SQ.MT.
2	2/3	X	26.17	X	4.77	X 1 NO	=	62.42	SQ.MT.
3	2/3	X	4.53	X	1.03	X 1 NO	=	3.11	SQ.MT.
4	2/3	X	14.11	X	0.31	X 1 NO	=	2.92	SQ.MT.
5	2/3	X	19.57	X	0.60	X 1 NO	=	7.83	SQ.MT.
6	1/2	X	19.57	X	2.34	X 1 NO	=	22.90	SQ.MT.
7	1/2	X	9.14	X	1.80	X 1 NO	=	8.23	SQ.MT.
8	1/2	X	20.28	X	1.06	X 1 NO	=	10.75	SQ.MT.
9	1/2	X	14.11	X	1.59	X 1 NO	=	11.22	SQ.MT.
10	1/2	X	13.98	X	1.49	X 1 NO	=	10.42	SQ.MT.
11	1/2	X	23.28	X	1.75	X 1 NO	=	20.37	SQ.MT.
12	1/2	X	31.41	X	10.72	X 1 NO	=	168.42	SQ.MT.
13	1/2	X	23.28	X	11.55	X 1 NO	=	134.44	SQ.MT.
14	1/2	X	11.06	X	3.01	X 1 NO	=	16.65	SQ.MT.
15	1/2	X	8.97	X	7.22	X 1 NO	=	32.36	SQ.MT.
16	1/2	X	16.11	X	3.00	X 1 NO	=	24.17	SQ.MT.
17	1/2	X	8.23	X	1.84	X 1 NO	=	7.57	SQ.MT.
18	1/2	X	2.84	X	1.12	X 1 NO	=	1.59	SQ.MT.
19	1/2	X	6.33	X	2.48	X 1 NO	=	7.85	SQ.MT.
20	1/2	X	2.75	X	0.85	X 1 NO	=	1.17	SQ.MT.
21	1/2	X	2.73	X	1.34	X 1 NO	=	1.83	SQ.MT.
22	1/2	X	5.70	X	2.58	X 1 NO	=	7.30	SQ.MT.
23	1/2	X	7.97	X	3.09	X 1 NO	=	12.31	SQ.MT.
24	1/2	X	7.97	X	2.05	X 1 NO	=	8.17	SQ.MT.
25	1/2	X	6.21	X	1.84	X 1 NO	=	5.71	SQ.MT.
26	1/2	X	4.73	X	2.17	X 1 NO	=	5.13	SQ.MT.
27	1/2	X	6.40	X	2.42	X 1 NO	=	7.74	SQ.MT.
28	1/2	X	3.04	X	1.39	X 1 NO	=	2.11	SQ.MT.
29	1/2	X	14.15	X	4.17	X 1 NO	=	29.50	SQ.MT.
30	1/2	X	10.20	X	1.59	X 1 NO	=	8.11	SQ.MT.
31	1/2	X	8.34	X	1.74	X 1 NO	=	7.26	SQ.MT.
32	1/2	X	2.57	X	0.30	X 1 NO	=	0.39	SQ.MT.
33	1/2	X	7.62	X	2.55	X 1 NO	=	9.72	SQ.MT.
34	1/2	X	2.64	X	0.68	X 1 NO	=	0.90	SQ.MT.
			TOTAL ADDITION				=	754.56	SQ.MT. X

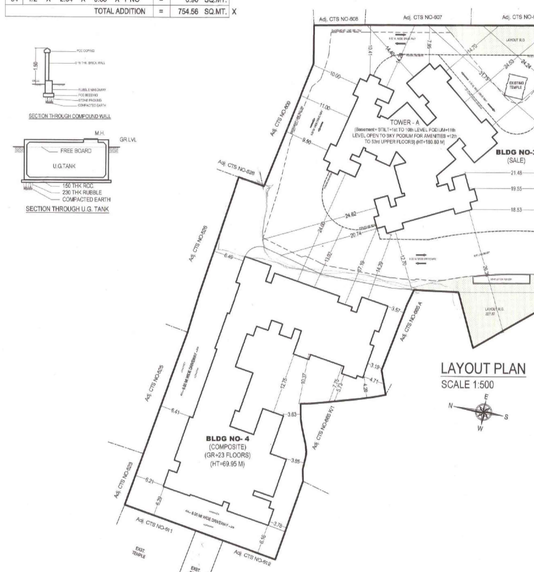
PLOT AREA CALCULATION									
1	0.50	X	37.52	X	15.36	X 1 NO	=	288.15	SQ.MT.
2	0.50	X	37.84	X	2.39	X 1 NO	=	45.22	SQ.MT.
3	0.50	X	39.73	X	4.69	X 1 NO	=	93.17	SQ.MT.
4	0.50	X	40.32	X	3.63	X 1 NO	=	73.16	SQ.MT.
5	0.50	X	42.27	X	4.37	X 1 NO	=	92.36	SQ.MT.
6	0.50	X	38.14	X	27.23	X 1 NO	=	519.28	SQ.MT.
7	0.50	X	41.15	X	10.03	X 1 NO	=	206.37	SQ.MT.
8	0.50	X	18.19	X	5.04	X 1 NO	=	45.84	SQ.MT.
9	0.50	X	47.95	X	15.17	X 1 NO	=	363.70	SQ.MT.
10	0.50	X	34.27	X	5.52	X 1 NO	=	94.59	SQ.MT.
11	0.50	X	47.95	X	26.91	X 1 NO	=	645.17	SQ.MT.
12	0.50	X	51.48	X	19.80	X 1 NO	=	509.65	SQ.MT.
13	0.50	X	56.30	X	7.58	X 1 NO	=	213.38	SQ.MT.
14	0.50	X	77.00	X	16.81	X 1 NO	=	647.19	SQ.MT.
15	0.50	X	23.32	X	11.57	X 1 NO	=	134.91	SQ.MT.
16	0.50	X	53.11	X	3.88	X 1 NO	=	122.43	SQ.MT.
17	0.50	X	50.20	X	55.55	X 1 NO	=	2505.31	SQ.MT.
18	0.50	X	67.04	X	9.89	X 1 NO	=	331.51	SQ.MT.
19	0.50	X	60.62	X	17.91	X 1 NO	=	542.85	SQ.MT.
20	0.50	X	32.96	X	21.17	X 1 NO	=	348.88	SQ.MT.
21	0.50	X	43.83	X	15.48	X 1 NO	=	339.24	SQ.MT.
22	0.50	X	43.83	X	9.41	X 1 NO	=	206.22	SQ.MT.
23	0.50	X	41.70	X	8.63	X 1 NO	=	138.24	SQ.MT.
24	0.50	X	41.77	X	12.78	X 1 NO	=	266.91	SQ.MT.
25	0.50	X	41.77	X	13.44	X 1 NO	=	280.69	SQ.MT.
26	0.50	X	44.66	X	10.69	X 1 NO	=	244.81	SQ.MT.
27	0.50	X	22.07	X	1.74	X 1 NO	=	19.21	SQ.MT.
28	0.50	X	19.81	X	9.03	X 1 NO	=	89.44	SQ.MT.
						TOTAL ADDITION	=	9407.90	SQ.MT. X

NON SLUM PLOT -1 AREA CALCULATION								
A	0.50	X	28.77	X	6.52	X 1 NO	=	93.79 SQ.MT.
B	0.50	X	28.77	X	16.66	X 1 NO	=	239.64 SQ.MT.
C	0.50	X	31.09	X	9.91	X 1 NO	=	154.05 SQ.MT.
						TOTAL ADDITION	=	487.48 SQ.MT. Y

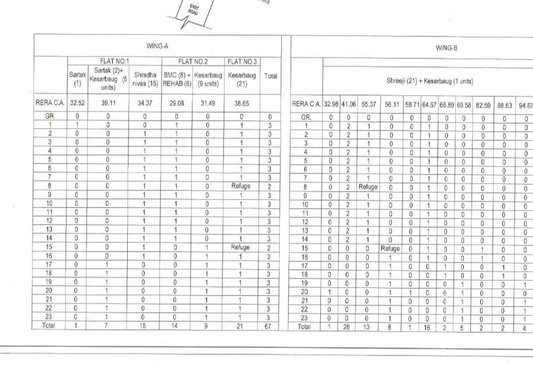
NON SLUM PLOT -2 AREA CALCULATION								
D	0.50	X	27.14	X	6.98	X 1 NO	=	94.72 SQ.MT.
E	0.50	X	27.14	X	19.71	X 1 NO	=	267.46 SQ.MT.
F	0.50	X	24.59	X	6.60	X 1 NO	=	81.12 SQ.MT.
						TOTAL ADDITION	=	443.30 SQ.MT. Y1

NON SLUM PLOT -3 AREA CALCULATION								
1	0.50	X	37.46	X	15.34	X 1 NO	=	287.32 SQ.MT.
2	0.50	X	37.78	X	2.39	X 1 NO	=	45.15 SQ.MT.
3	0.50	X	39.67	X	4.68	X 1 NO	=	92.83 SQ.MT.
4	0.50	X	40.26	X	3.63	X 1 NO	=	73.07 SQ.MT.
5	0.50	X	42.20	X	4.36	X 1 NO	=	92.00 SQ.MT.
6	0.50	X	38.07	X	27.18	X 1 NO	=	517.37 SQ.MT.
7	0.50	X	41.08	X	10.01	X 1 NO	=	205.61 SQ.MT.
8	0.50	X	18.16	X	5.03	X 1 NO	=	45.67 SQ.MT.
9	0.50	X	47.87	X	15.15	X 1 NO	=	362.52 SQ.MT.
10	0.50	X	47.87	X	6.69	X 1 NO	=	160.13 SQ.MT.
11	0.50	X	30.33	X	13.31	X 1 NO	=	201.92 SQ.MT.
12	0.50	X	34.21	X	3.19	X 1 NO	=	54.55 SQ.MT.
13	0.50	X	34.21	X	5.51	X 1 NO	=	94.25 SQ.MT.
						TOTAL ADDITION	=	2232.50 SQ.MT. Y2

TOTAL NON SLUM AREA (Y+Y1+Y2) = 3163.28 SQ.MT.



R.G. AREA DIAGRAM
SCALE 1:500



LAYOUT PLAN
SCALE 1:500

| WING-A | | | | | | | | |

Arihant Construction Co.

203-204, Orbit Plaza, 2nd floor, New Prabhadevi Marg, Prabhadevi, Mumbai – 400025
Ph no. 91 22 49153599 Fax 91 22 49153513

18 JUN 2020

Date: 17/06/2020

To,
The Municipal Commissioner,
Municipal Corporation of Greater Mumbai (M.C.G.M.),
Mahapalika Marg, Fort, Mumbai 400001.

Subject : Contribution towards CER for 'Slum Rehabilitation Scheme' at village Mulund (E), "T' Ward of MCGM, at Gopal Krishna Gokhale Road, Mulund (E), Mumbai – 400081.

Reference : Office Memorandum regarding Corporate Environment Responsibility (CER) dt. 1st May 2018 by Ministry of Environment, Forest and Climate Change (MoEF& CC), New Delhi.

Respected Sir,

With reference to above mentioned subject, we are developing a **'Slum Rehabilitation Scheme'** at village Mulund (E), "T' Ward of MCGM, at Gopal Krishna Gokhale Road, Mulund (E), Mumbai – 400081 that is under process for Environmental Clearance NOC.

As per the guidelines given by the MoEF & CC we are required to provide upto 0.75% of the Capital Investment towards CER.

We have identified certain activities to be carried out in immediate neighborhood which when implemented shall be beneficial to the environment and the general public at large. The activities identified are as follows:

- Infrastructure creation for health and sanitation – Construction/ improvement of public toilets.
- Education – Enhancement of school infrastructure in Mumbai.

We intend to spend approximately **Rs. 2.19 Crores** on the CER activities

We request you to kindly evaluate the above plan and grant your consent to undertake these activities under CER.

Thanking you,

Yours Faithfully,
For ARIHANT CONSTRUCTION CO.

AUTHORIZED SIGNATORY

Enclosed:
1. Copy of Circular dated 19/06/2018, and Office Memorandum dated 01/05/2018 of MoEF and CC.
2. Copy of CER Activity with details

MUNICIPAL CORPORATION OF GREATER MUMBAI

No. CHE/HRB-877/DPES of 07 JUN 2021

OFFICE OF THE:
Chief Engineer (Development Plan)
Brihanmumbai Mahanagarpalika,
Municipal Head Office, 5th Floor,
Annex Building, Mahapalika Marg,
Fort, Mumbai-400 001.

To,
M/s. Catapult Realty Consultants,
203-204, 2nd Floor, Orbit Plaza,
New Prabhadevi Road,
Mumbai 400 025.

Sub : Proposed High Rise sale building No.3 (Tower A & Tower B) in Slum Redevelopment Scheme under regulations 33(10), 33(7)(A), 33(7)(B) read with 30(A) and 32 of DCPR 2034 on land bearing C.T.S. No. 669, 669/01 to 35, 670, 673, 673/01 to 07, 610, 610/01 to 26 & 666 of village Mulund East at Gopal Krishna Gokhale Marg, Mulund (East) in T-Ward.

Developer : M/s. Arihant Construction Co.
Architect : M/s. Catapult realty consultants.
Str. Con : M/s. JW Consultants LLP.
Geotech.con. : M/s. Geocon International Pvt.Ltd.

Ref : Your letter dtd. 24.07.2020

Gentleman,

With reference to your above referred representation regarding subject matter, I have by direction to inform you that the High Rise Committee constituted by Hon'ble Municipal Commissioner under Regulation 19(3) of Development Control & Promotion Regulation 2034 has accepted your proposal for High Rise sale building No.3 (Tower A & Tower B) on land bearing C.T.S. No. 669, 669/01 to 35, 670, 673, 673/01 to 07, 610, 610/01 to 26 & 666 of village Mulund East at Gopal Krishna Gokhale Marg, Mulund (East) in T-Ward as per the High Rise Committee meeting held on 19.09.2020, subject to the terms & conditions as mentioned below:-

The proposal envisages construction of proposed High Rise Residential Sale Building No.3 (Tower A & Tower B) comprising of 2 level Basements + Stilt + 7 Podium floors + 8th Eco Deck floor + 9th to 49th

upper residential floor with total height of 169.20 mtr from general ground level to terrace level.

MANDATORY CONDITIONS:

1. Access roads to the site and roads on the site that will be required as per plan permanently should be minimum water bound macadam road and constructed before construction activities commence. This will help in reducing local dust emissions to a great extent. The road can be converted to a black top road once the construction activities are completed.
2. As the site is located in an developed urban area, it is essential to enclose the site using barriers, to reduce the noise and dust impacts on surrounding buildings and sites.
3. Jack hammers and other construction equipments tend to generate a lot of noise, it is therefore essential that noise protective equipments like ear muffs & ear plugs be provided to the operator of the machine. To reduce the noise from the equipment, silencer/ dampers should be attached to the equipment.
4. All Stationary machinery that create noise should be installed at points away from sensitive receptor area.
5. Noise prone activities should be restricted to the extent possible during night time, particularly during the period 6p.m. to 6.a.m.
6. During excavation and transportation over un-metalled roads near the project site, there is a scope for local dust emissions. Frequent water sprinkling in the vicinity of the construction activity should be done and it should be continued even after the completion of the excavation till construction is complete.
7. Excavation should be carried out in such a manner that it will not reduce slope stability. As much of the top soil and waste materials as possible should be used for landscaping and leveling activities in the surrounding area. As far as possible store the excavated soil (the amount that would be required later for leveling and landscaping) on site, so that the soil can be reused during landscaping.
8. A basic surface drainage system for the site should be worked out to avoid water runoff on to the surrounding properties and roads, especially during the monsoon months.
9. If during excavation, water accumulates in the excavated areas, then it should be pumped out and disposed off either in the municipal storm water drain or into recharge soak pits of bore wells.
10. Load and unload trucks with construction material on site and not on surrounding roadside.

11. The responsibility to carryout the work as per submissions made to the Committee solely rests with the project proponents.

12. If the project attracts the provisions of the MOEF Notification under SO No.114(E) dt.19.2.1991 and recent Notification dt.6.1.2011 and Notification dtd.07-07-2004 & revised EIA Notification dtd.14.9.2006, the clearance in this respect shall be obtained and all the conditions mentioned therein shall be complied with.

13. The approval of High Rise Committee is for the proposed **High Rise Building** having total height of **169.20 mt**. from the general ground level to the terrace level, subject to obtaining sanction from Competent Authority as per various provisions of D.C.P. Regulations 2034 amended up to date, such as deficiency in open spaces, CFO requirement, parking requirement, Civil Aviation NOC, if any, etc.

14. The conditions as stated in the NOC from CFO U/No. FB/HRC/R-VI/06 dtd.22.11.2019 shall be complied with. If the plans cleared by Committee, differ from the plans of CFO NOC, revised CFO NOC shall be submitted to the concerned Slum Rehabilitation Authority.

15. That the NOC from Civil Aviation Authority for the height of the building under reference shall be obtained, if applicable, and all the conditions thereof shall be complied with.

16. The acceptance of proposal by High Rise Committee is not indicative of admissibility/approval of the proposal regarding D.C.R.1991/ D.C.P.Regulations, 2034 other statutory compliances & the necessary proposal shall be submitted to concerned Executive Engineer (S.R.A.) for requisite approval. The aspect such as permissible FSI, applicable DC.P.Regulations & policies in force shall be verified by the concerned Executive Engineer (S.R.A.) before approval of plans.

17. The Technical Committee for High Rise Buildings, however, reserves right to alter/ modify/ augment fire safety related provisions as well as disaster management related provisions, on the basis of decision to be taken in the upcoming meetings.

18. That the permission is granted based on the documents submitted by the Architect and if at any time are found fake/ fraudulent, then the permission issued shall be treated as revoked/ cancelled without further notice.

19. After the clearance given by HRC for a proposed building, not further changes of any kind shall be effected without permission of the HRC (Technical Committee for High Rise Buildings). If any changes made in the proposal without obtaining clearance from HRC, earlier clearance given by the HRC shall be treated as revoked/ invalid.

20. That the aspect regarding approval/ final NOC to the 33(18) component, if any, and its respective permission shall be scrutinized

by Slum rehabilitation Authority as per the prevailing policy and the sanction from respective HPC shall be obtained.

21. The necessary other permissions from various other Departments/ Committees/ Authorities shall be obtained as per requirements.

Recommendatory Condition

1. At the time of site clearance, care must be taken to minimize the need for cutting of trees and damage to the native vegetation.

2. Clearing of site area may involve removal/ transplantation of trees, underbrush, vines, fences, shades etc. All the unwanted vegetation then becomes solid waste that needs to be disposed off site. As this is organic matter, instead of disposing it offsite, the mater should be composed on site.

3. Phase out the site clearing process to only areas that need excavation initially this will reduce the dust emission from currently unused areas. If site has been cleared, vegetate the area by growing temporary groundcover plants or flower beds in the area. Alternatively cover the ground with a sheet, this sheet can be made out of empty cement bags, and the area then used to store materials, this will help reduce the dust emissions from these areas and provide a clean surface to store material on.

4. To reduce dust emissions and erosions from slopes on the site, apply non toxic chemical soil stabilizers (Geotextiles) to the area.

5. The short term traffic management plan should be worked out to prevent unnecessary traffic problems. One measure to be incorporated is to avoid trucks during the morning and evening rush hours i.e. before 10.00 a.m. and after 5.00 p.m.

6. In cases where the construction of paved access or Water bound macadam road is not possible, frequent water sprinkling required to reduce local dust emissions.

7. Traffic speeds on unpaved roads should be reduced to 15 Km.ph. or less, and all the vehicles should have reverse horns.

8. On windy days avoid excavation activities to reduce dust emissions.

9. Prevent the excavated soil from spilling out of the site boundaries onto adjoining roads and properties.

10. Prevent other garbage waste such as construction debris, plastic material from mixing with the excavated soil that is being transported out of the site for dumping off site. This soil will be used for land filling and mixing of garbage with it can lead to soil contamination.

11. Water the site at least twice a day to reduce the dust emissions. Once during mid morning and once in the evening.

12. Soil stockpiled for more than two days shall be covered, kept moist or treated with soil binders to prevent dust generation. (A good cover sheet can be formed by stitching empty cement bags silt open to form a sheet).

13. Since, there is likelihood of fugitive dust form the construction activity, material handling and from the truck movement in the vicinity of the project site, project proponents should go for tree plantation programme along the approach roads and the construction campus.

14. Re-vegetate disturbed areas as early as possible.

15. As soon as construction is over, the surplus earth should be utilized to fill up low lying areas. The rubbish should be cleared and all un built surfaces reinstated.

16. Construct appropriate temporary housing structures for the labourers on the site with due approval from the competent authority. Houses should be provided with proper light and ventilation, and should be located at a safe location on the site.

17. Provisions should be made for providing them with potable, drinking water.

18. The construction site should be provided with sufficient and suitable toilet facilities for workers to allow proper standards of hygiene. These facilities would be connected to septic tank and maintained properly to ensure minimum environmental affect. Care should be taken not to route the sanitary effluents to the river or any other natural water body.

19. To prevent unauthorized falling of trees in the nearby undeveloped areas by construction workers for their fuel needs, it should be ensured that the contractor provides fuel to the construction workers.

20. Arrangements should be made for daycare and education to construction workers children. Certain NGO's working in this area can be associated with or alternatively one female worker can be paid to oversee the younger children and to prevent them from coming in harms way.

21. Solid waste generated from the labour camp as well as the construction site should be disposed off properly. Organic waste can be composted, and inorganic waste should be disposed in nearest municipal bins.

22. To sweep and clean adjacent roads of the site that get soiled due to the frequent movement of trucks to and fro from the site, at least once a day.

23. All outdoor lighting, including any construction related lighting should be designed, installed and operated in a manner that ensures that all direct rays from project lighting are contained within construction site and that residences are protected from spillover light and glare.

24. Parking for construction site workers should be provided on site to prevent clogging of surrounding roads.

25. Tea stalls if established for the site should be given space on site and not on access roads. This will prevent the gathering of labourers on the roads and obstruction of traffic.

26. Rotary piling method can be adopted for construction of bored cast in site/ bored pre-cast piles. Preferably, M.S. liner can be provided upto hard stratum.

27. Preferable minimum grade concrete in sub structure foundation can be M-40 grade and use of anti corrosive treatment can be considered for M.S. reinforcements.

28. Ground Water in Mumbai is likely to be saline and further there is a possibility of sewage contamination in well water, as such, municipal water be used for construction.

29. Withdrawal of ground water should be restricted as it may cause sudden draw-down and subsidence of surrounding land/buildings.

30. The electric meters and substation in the buildings be located on higher level to prevent power failure during floods.

31. While approving the proposal for building above 120 mt. the minimum width of access road shall be as per Regulation 19(2) of DCPR 2034.

If your client is agreeable to the aforesaid terms and conditions, you may approach to the DY.CH.ENG.(S.R.A.), who is being informed separately regarding subject matter.

Yours faithfully,

Acc:- A Set of Plan

01/06/2023

(V.P. Chithore)
Chief Engineer
(Development Plan)

N/1

MUNICIPAL CORPORATION OF GREATER MUMBAI

NO: CHE/HRB-877/DPES 21 JUN 2021

Sub : Proposed High Rise sale building No.3 (Tower A & Tower B) in Slum Redevelopment Scheme under regulations 33(10), 33(7)(A), 33(7)(B) read with 30(A) and 32 of DCPR 2034 on land bearing C.T.S. No. 669, 669/01 to 35, 670, 673, 673/01 to 07, 610, 610/01 to 26 & 666 of village Mulund East at Gopal Krishna Gokhale Marg, Mulund (East) in T-Ward.

Developer : M/s. Arihant Construction Co.
Architect : M/s. Catapult realty consultants.
Str. Con : M/s. JW Consultants LLP.
Geotech.con. : M/s. Geocon International Pvt.Ltd.

Arch. of M/s. Catapult realty consultants have submitted a proposal for High Rise Building on the land under reference to the Technical Committee constituted by Hon'ble Municipal Commissioner under Regulation 19(3) of Development Control & Promotion Regulation 2034 for scrutiny of High Rise Building having height more than 169.20 mtrs..

Architect has paid the requisite scrutiny fee of Rs. 300,000 /- vide receipt No. 1003879258 dtd. 29.07.2020.

Sanctioned Development Plan 2034

As per Development Plan 2034, the land bearing C.T.S. No. 669, 669/01 to 35, 670, 673, 673/01 to 07, 610, 610/01 to 26 & 666 of village Mulund East is not affected by any reservation. The plot ~~gains~~ derives access from existing road and is situated in Residential Zone(R).

Proposal:

The proposal envisages construction of proposed High Rise Residential Sale Building No.3 (Tower A & Tower B) comprising of 2 level Basements + Stilt + 7 Podium floors + 8th Eco Deck floor + 9th to 49th upper residential floor with total height of 169.20 mtr from general ground level to terrace level.

Scrutiny of the Technical Committee for High Rise Buildings:

a) Site Visit:

The site was visited by the Members of the High Rise Building Committee on 28.08.2020.

b) Meeting with Project Consultants:

The submissions made by the Architect, Structural Consultant, MEP consultant and Soil Investigation Consultant regarding the project were discussed in the High Rise Committee meeting held on 19.09.2020 in presence of Project Proponent/ Consultants.

Remarks from Building Permission Cell, Greater Mumbai/ SRA:

Executive Engineer-III, Slum Rehabilitation Authority vide his note U/No. SRA/ED/OW/2021/2637/T.19.01.2021 has informed that,

C.E.O.(SRA) has granted approval to concessions / special permissions required for approving the plans of sale building no. 3 (Tower A & B) comprising of two level basement for accommodating required car parking and services + stilt for parking / entrance lobby + 10 level podium floors for parking + 11th level open to sky podium for amenities / fitness centre etc. + 12th to 53rd upper floors with service floors between 20th & 21st floor and 40th & 41st floor respectively has been obtained on 14/01/2020 for total height of building above ground level of 180.80 mtr.

It is also mentioned that, the plans of sale building are of approvable nature.

Remarks from C.F.O.:

C.F.O. vide his NOC U/No. FB/HRC/R-VI/06 dtd.22.11.219 has informed that, as far as CFO Department is concerned, there is no objection for the proposed construction of high rise sale building (Tower A & Tower B) having common 2 level Basement thereafter the building is divided into 02 towers i.e. having Ground floor part on stilt + 1st to 10th podium levels + 11th Eco Deck floor (Double height) 12th to 53rd upper floors with total height of 180.80 mtr from the general ground level to the terrace level, signed in token of approval, subject to satisfactory compliance of the requirements therein.

N/3

Accordingly, a necessary condition is incorporated in Annexure-I (Condition No.14 of Mandatory Conditions).

It is also mentioned in NOC that, the earlier NOC issued u/no. FB/HRC/RVI/04 dtd. 25.05.2018 along with stipulations and requirements therein shall be treated cancelled.

Clearance of Technical Committee for High Rise Buildings in the meeting held on 19.09.2020:

The proposal was discussed in the meeting of Technical Committee for High Rise Buildings held on 19.09.2020.

The relevant extract from the Minutes of the meeting of Technical Committee for High Rise Buildings held on 19.09.2020 are reproduced as follows:-

HRB Proposal No. 877 : *Proposed High Rise sale building No.3 (Tower A & Tower B) in Slum Redevelopment Scheme under regulations 33(10), 33(7)(A), 33(7)(B) r/w 30(A) and 32 of DCPR 2034 on land bearing C.T.S. No. 669, 669/01 to 35, 670, 673, 673/01 to 07, 610, 610/01 to 26 & 666 of village Mulund East at Gopal Krishna Gokhale Marg, Mulund (East) in T-Ward, Mumbai – 400081.*

Developer : M/s. Arihant Construciton Co.
Architect : M/s. Catapult realty consultants.
Str. Con : M/s. JW Consultants LLP.
Geotech.con. : M/s. Geocon International Pvt.Ltd.

The proposal envisages construction of proposed Residential sale High Rise Building no.3 (Tower A & Tower B) comprising of 2 level Basement + Stilt + 7 Podium + 8 th Eco Deck floor + 9 th to 49 th upper residential floor with total height of 169.20 mtr from the general ground level to the terrace level.

The proposal is discussed in the meeting and following observations & suggestions were made by the Committee:-

1) *The presentation delivered by MEP consultant is found satisfactory from CFO point of view.*
2) *Concession approval from SRA should be submitted before issuing HRC NOC.*
3) *Geotechnical point satisfactory.*
4) *Structural design basis parameters and response of the building were discussed and found satisfactory.*

Today the proposal is finally cleared from Geotechnical, Structural, Architectural, Fire & Safety points of view.

The Architectural plan shall be signed by Committee.

As such, Technical Committee constituted by Hon'ble Municipal Commissioner under Regulation 19(3) of Development Control & Promotion Regulation 2034 has recommended the proposal for clearance from High Rise Building point of view.

Approval:

As afore stated, the Technical Committee for High Rise Buildings has accepted the proposal under reference from high rise point of view only. The mandatory conditions and recommendatory conditions are incorporated in Annexure-I, cognizance of the same will be taken by concerned Slum Rehabilitation Authority as per the policies in force & D.C.P.R.2034, while processing the regular building proposal.

As the Technical Committee for High Rise Buildings constituted by Hon'ble Municipal Commissioner under Regulation 19(3) of Development Control & Promotion Regulation 2034 has accepted the proposal & recommended for clearance, Hon'ble M.C.'s approval is requested to issue High Rise Committee NOC for proposal envisaging construction of proposed High Rise Residential Sale Building No.3 (Tower A & Tower B) comprising of 2 level Basements + Stilt + 7 Podium floors + 8th Eco Deck floor + 9th to 49th upper residential floor with total height of 169.20 mtr from general ground level to terrace level on plot bearing C.T.S. No. 669, 669/01 to 35, 670, 673, 673/01 to 07, 610, 610/01 to 26 & 666 of village Mulund East in T-Ward.

On receipt of approval, the letter will be issued under the signature of Ch.Eng.(D.P.).

Submitted please.

Jadhav 21/05/2021
(Sanjay B. Jadhav)
A.E.(DP)HRC

21/05/2021
(V.P.Chithore)
CH.ENG.(D.P.)

(I.S. Chahal)
Hon.M.C.
Sir,

mcp/9167
31.05.21

D:\1Pratik\HRB data\Final Report & NOC\Approval note HRB 877.docx

Ch.E-(D.P)

Municipal Commissioner

बृहन्मुंबई महानगरपालिका
आयुक्तांचे कार्यालय

21 MAY 2021

समय ११, १२, १३, १४, १५, १६, १७, १८,
क्रमांक MCP/ 9167

31-05-21

बृहन्मुंबई महानगर पालिका
प्रमुख अभियंता (विकास नियोजन)
यांचे कार्यालय

११		३
१२		४
१	31 MAY 2021	५
२		६

005535

ज.न.अ./वि.नि./

साधारण	शहर	पूर्व. उप	प. उप
मा. अधि.	टिडीआर	लेखा	आस्था

AE (DP) HRC

01/06/21

Ch. Engineer (D.P.)
& Dir. (E.S. & P.)

Shri. Tandel SE (DP) HRB
pl. put up NOC.

01/06/2021

SLUM REHABILITATION AUTHORITY

No. SRA/ENG/1715/T/PL/AP

Date: 24 JAN 2022

To,
Shri Vilas P. Kharche,
M/s. Catapult Realty Consultants,
202-203, 2nd floor, Orbit Plaza,
New Prabhadevi Road, Prabhadevi, Dadar (West),
Mumbai - 400 025.

Sub:- Amended Building Plans cum Full O.C.C. to Proposed Bldg. No. 1 (rehab) under S.R. Scheme on plot bearing C.T.S no.- 669, 669/1 to 35 & 670, 673, 673/1 to 7, 610, 610/1 to 26 & 666 of village Mulund (e), Mumbai 400081

Ref: 1) Your letter dated 17/12/2020.
2) Licensed Surveyor completion certificate dtd. 17/12/2020.
3) Structural Engineer completion certificate dtd. 25/01/2021.
4) Site Supervisor completion certificate dtd. 17/12/2020.

Sir,

With reference to your letter mentioned above, I have to inform you that the permission to occupy the Rehab building no. 1 i.e. full OC in on plot bearing C.T.S no.- 669, 669/1 to 35 & 670, 673, 673/1 to 7, 610, 610/1 to 26 & 666 of village Mulund (e), Mumbai 400081 which is completed under the supervision of Licensed Surveyor, Shri. Vilas P. Kharche of M/s. Catapult Realty Consultants (Lic. No. K/435/LS), Licensed Structural Engineer Shri. Jagdish Shah of Consulting Structural Engineer (Reg. No. STR/S/106), Site Supervisor Shri. Chandrakant Patil (Reg. No. P/322/SS-I), may be occupied on the following conditions.

1) This occupation permission is granted to Rehab building (Gr. + 7th upper floors) for 57 Nos. of Rehab Resi. t/s + 04 Nos. of Rehab Comm. t/s + 02 Rehab R/C+ 01 Nos. of Balwadi + 01 Nos. of Welfare Center.

2) All the pending IOA and LOI conditions shall be duly complied with before asking full occupation to the composite building.

3) That the certificate under section 270A of BMC Act shall be obtained from A.E.W.W. (T) and a certificate copy of the same shall be submitted to this office.

Administrative Building, Anant Kanekar Marg, Bandra(E), Mumbai- 400051
Tel. : 022-26565800/26590405/1879 Fax : 91-22-26590457 Website : www.sra.gov.in E-mail : info@sra.gov.in

4) That the SWD completion certificate of MCGM shall be submitted before asking full OCC of Sale building and till then adequate precautions shall be taken for draining surface water.

5) That you shall pay all dues of MCGM and other authority.

6) That the Layout R.G. shall be duly developed before OC to sale bldg.

7) The Amenity tenements of Anganwadi shall be handed over to the Woman and Child Welfare Department, Government of Maharashtra as per Circular No. 129. within 30 days from the date of issue of OCC of Rehab/Composite bldg. handing over / Taking over receipt shall be submitted to SRA by the developer.

8) That you shall carry out the lottery/allotment of the residential Rehab Tenements through ARS, SRA and submit allotment list to this office.

9) That you shall take adequate precaution for safety while carrying out balance work in scheme.

Note: This permission is issued without prejudice to action under M.R. & T.P. Act.

Yours faithfully,

sd -

Executive Engineer
Slum Rehabilitation Authority

Copy to:

1. Society: - "Shivangan SRA CHS Ltd.".
2. Developer: - M/s. Arihant Construction Co.
3. Asstt. Commissioner (T) Ward
4. A.E.W.W. (T) Ward
5. A.A. & C. (T) Ward

For information please.

Executive Engineer
Slum Rehabilitation Authority

SLUM REHABILITATION AUTHORITY

No. T/PVT/0040/20040928/AP/C-2

Date: 12 MAY 2023

To,
Shri Vilas P. Kharche,
M/s. Catapult Realty Consultants,
202-203, 2nd floor, Orbit Plaza,
New Prabhadevi Road, Prabhadevi, Dadar (West),
Mumbai - 400 025.

Sub :- Approval to Amended Plans & Part Occupation Certificate (1st to 23rd floor) for Composite building no. 2 in S.R. Scheme on land bearing CTS no. 669(pt), 669/1 to 35 & 670, 673, 673/1 to 7, 610, 610/1 to 26 & 666 of village Mulund(E), 'T' Ward of MCGM. at Gopal Krishna Gokhale Road, Mulund (E), Mumbai-400081 for Shivangan SRA CHS Ltd.

Ref: 1) Your letter dated 16/11/2022.
2) Licensed Surveyor completion certificate dtd. 16/11/2022.
3) Site Supervisor completion certificate dtd. 16/11/2022.

Sir,

With reference to your letter mentioned above, I have to inform you that the permission to occupy the Composite building no. 2 i.e., 1st to 23rd floor on plot bearing C.T.S no.- 669(pt), 669/1 to 35 & 670, 673, 673/1 to 26 & 666 of village Mulund(E), 'T' Ward of MCGM. at Gopal Krishna Gokhale Road, Mulund (E), Mumbai-400081. Which is completed under the supervision of Licensed Surveyor, Shri. Vilas P. Kharche of M/s. Catapult Realty Consultants (Lic. No./LS:840015585), Licensed Structural Engineer Shri. Achyut Narayan Watve of Consulting Structural Engineer (License No./STR:840011868), Site Supervisor Shri. Chandrakant Patil (Lic. No. P/322/SS-I), may be occupied on the following conditions.

1) This occupation permission is granted to Composite building no. 2 (1st + 23rd upper floors) for 108 Nos. of Rehab Resi. t/s + 01 Nos. of Existing Amenity (Office) + 01 Nos. of Society Office + 01 Nos. of Amenity 1 + 01 Nos. of Amenity 2 + 04 Nos. Sale Units.

2) All the pending IOA and LOI conditions shall be duly complied with before asking OCC of Sale Building.

3) That the certificate under section 270A of BMC Act shall be obtained from A.E.W.W. (T) and a certificate copy of the same shall be submitted to this office.

4) That the SWD completion certificate of MCGM shall be submitted before asking full OCC of Sale building and till then adequate precautions shall be taken for draining surface water.

5) That you shall pay all dues of MCGM and other authority.

6) That the Layout R.G. shall be duly developed before OC to sale bldg.

7) That you shall take adequate precaution for safety while carrying out balance work in scheme.

Note: This permission is issued without prejudice to action under M.R. & T.P. Act.

Yours faithfully,

Executive Engineer
Slum Rehabilitation Authority

Copy to:

1. Society: - "Shivangan SRA CHS Ltd.".
2. Developer: - M/s. Arihant Construction Co.
3. Asstt. Commissioner (T) Ward
4. A.E.W.W. (T) Ward
5. A.A. & C. (T) Ward

For information please.

Executive Engineer
Slum Rehabilitation Authority

MAHARASHTRA POLLUTION CONTROL BOARD

Phone : 24010437/24020781 /24037124/24035273
Fax : 24044532/24024068 /24023516
Email : jdwater@mpcb.gov.in
Visit At : http://mpcb.gov.in

Kalpataru Point, 3rd & 4th floor,
Sion- Matunga Scheme Road No. 8,
Opp. Cine Planet Cinema,
Near Sion Circle, Sion (E),
Mumbai - 400022

Infrastructure /Red/LSI **Date- 13 / 11 /2020**

Consent No: Format1.0/BO/JD(WPC)/UAN No. 95269/CE/CC- 2011000967

To,
M/s. ARIHANT CONSTRUCTION CO.
At land bearing CTS No.669 (pt), CTS No.669/1 to 35 & 670, 610, 610/1 to 26, 666 and CTS No.673, 673/1 to 7, Village Mulund (E), "T" Ward of MCGM, at Gopal Krishna Gokhale Road, Mulund (E), Mumbai

Subject: Consent to establish in Red Category for construction project under SRA.

Ref : 1. Consent application submitted by Sub-Regional Officer, Mumbai-III.
2. Minutes of 9th CC meeting held on 27.08.2020

Your application: UAN No.0000095269 Dated: 24.07.2020

For: Consent to establish in Red Category for construction project under SRA.

under Section 25 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 5 of the Hazardous and Other Wastes (M & TM) Rules, 2016 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I, II, III& IV annexed to this order:

1. **The consent is granted for a period up to: Commissioning of the project or five years whichever is earlier.**

2. **The proposed capital investment of the project is Rs. 291.87 Crs. (As per CA certificate submitted by project proponent)**

Consent to establish is valid for construction project under SRA named as **M/s. ARIHANT CONSTRUCTION CO. At land bearing CTS No.669 (pt), CTS No.669/1 to 35 & 670, 610, 610/1 to 26, 666 and CTS No.673, 673/1 to 7, Village Mulund (E), "T" Ward of MCGM, at Gopal Krishna Gokhale Road, Mulund (E), Mumbai on Total plot area of 9407.90 Sqm and total Construction BUA 126792.41 Sqm as per EC dtd 08.07.2020** including utilities and services as per construction commencement certificate issued by local body.

3. **Conditions under Water (P&CP), 1974 Act for discharge of effluent:**

Sr. No.	Description	Permitted quantity of discharge (CMD)	Standards to be achieved	Disposal
1	Trade effluent	NIL	NA	NA
2	Domestic effluent	522	As per Schedule –I	60%should be reused &recycled and remaining should be discharged in municipal sewer

4. **Conditions under Air (P& CP) Act, 1981 for air emissions:**

Sr. No.	Description of stack/ source	Capacity	Number Of Stack	Standards to be achieved
1	DG Set-3 Nos	500 KVA each	03	As per Schedule-II
2	DG Set	400 KVA	01	
3	DG Set	250 KVA	01	

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https://blockchain.ecmpcb.in/docs/9732704a51e697e4e55a7da2cddd74be47e78f3dd02cd146b86a7e59abbc16c1

5. **Conditions under Solid Waste Management Rules, 2016:**

Sr. no.	Type Of Waste	Quantity & UoM	Treatment	Disposal
1	Wet garbage	799 Kg/Day	OWC	Used as Manure
2	Dry garbage	1203 Kg/Day	–	Segregate and Hand over to Local Body for recycling
3	STP Sludge	20 Kg/Day	–	Used as Manure

6. **Conditions under Hazardous and Other Wastes (M & TM) Rules, 2016 for treatment and disposal of hazardous waste:**

Sr. No.	Type of Waste	Category	Quantity	UOM	Disposal
1	Used Oil/Spent Oil	5.1	100	Lit/A	By sale to Auth. Reprocessor

7. The Board reserves the right to review, amend, suspend, revoke etc. this consent and the same should be binding on the industry.
8. This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government authorities.
9. Project Proponent shall comply the Construction and Demolition Waste Management Rules, 2016 which is notified by Ministry of Environment, Forest and Climate Change dtd.29/03/2016.
10. Project Proponent shall install online monitoring systems for pH, TSS and flow at the outlet of STP.
11. Project Proponent shall provide Organic waste digester with composting facility or Biogas digester with composting facility.
12. Project Proponent shall submit an affidavit in Board's prescribed format within 15 days regarding the compliance of conditions of EC/CRZ clearance and C to O.
13. The applicant should comply with the conditions stipulated in Environmental clearance obtained vide No. SIA/MH/MID/153429/2020 dtd 08.07.2020 for construction project having total plot area of 9407.90 Sqm and total Construction BUA 126792.41 Sqm.

For and on behalf of the
Maharashtra Pollution Control Board

(Ashok Shingare, IAS)
Member Secretary

Received Consent fee of –

Sr. No.	Amount (Rs.)	Transaction No.	Date
1	583740	RTGS MPCB-DR-1228	04.08.2020

Copy to:

1. Regional Officer, MPCB, Mumbai and Sub-Regional Officer, MPCB, Mumbai-III. – They are directed to ensure the compliance of the consent conditions.
2. Chief Accounts Officer, MPCB, Mumbai.
3. CC/CAC desk- for record & website updating purposes.

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Schedule-I

Terms & conditions for compliance of Water Pollution Control:

1) A] As per your application, you have provided Three Sewage Treatment Plant (STP) with total design capacity of **580 CMD** based on MBBR Technology.

B] The Applicant shall operate the effluent treatment plant (STP) to treat the sewage so as to achieve the following standards prescribed by the Board or under EP Act, 1986 and Rules made there under from time to time, whichever is stringent.

Sr No.	Parameters	Standards prescribed by Board Limiting Concentration
1	pH	6.5 to 9.0
2	BOD (3 days 27oC)	10mg/l
3	Suspended Solids	20mg/l
4	COD	50mg/l
5	Total Nitrogen	10 mg/l
6	Ammonical Nitrogen	5 mg/l
7	Fecal Coliform	100 MPN/100ml

C) The treated effluent shall be 60% recycled for secondary purposes such as toilet flushing, air conditioning, firefighting, on land for gardening etc and remaining shall be discharged in to the municipal sewerage system.

D] Project proponent shall operate STP for five years from the date of obtaining occupation certificate.

The Board reserves its rights to review plans, Specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant should obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or and extension or addition thereto

2) The industry should ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.

3) The Applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Act, 1974 and as amended, by installing water meters and other provisions as contained in the said act.

Sr. no.	Purpose for water consumed	Water consumption quantity (CMD)
1	Domestic purpose	603

4) The Applicant shall provide Specific Water Pollution control system as per the conditions of EP Act, 1986 and rule made there under from time to time.

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Schedule-II

Terms & conditions for compliance of Air Pollution Control:

1. As per your application, you have installed the Air pollution control (APC)system and also proposed to erect following stack (s) and to observe the following fuel pattern-

Sr. No.	Stack Attached To	APC System	Height in Mtrs.*	Type Of Fuel	Quantity	UOM	S%	SO_2 Kg/day
1	DG Set-500 KVA-3 Nos	Acoustic Enclosure	4.5 each	Diesel	221	Lit/Hr	1.0	53.04
2	DG Set-400 KVA	Acoustic Enclosure	4.0					
3	DG Set-250 KVA	Acoustic Enclosure	3.5					

* Above roof of the building in which it is installed.

2. The applicant should operate and maintain above mentioned air pollution control system, so as to achieve the level of pollutants to the following standards.

Particulate matter	Not to exceed	150 mg/Nm³.

3. The Applicant should obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacement alteration well before its life come to an end or erection of new pollution control equipment.
The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).

Maharashtra Pollution Control Board

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Schedule-III
Details of Bank Guarantees

Sr. No.	Consent (C to E/O/R)	Amt of BG Imposed	Submission Period	Purpose of BG	Compliance Period	Validity Date
1	Consent to establish	Rs. 10 Lakhs	15 Days	Towards Compliance of Environmental Clearance &Consent conditions.	Continuous	5 Yrs

Maharashtra Pollution Control Board

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Schedule-IV

General Conditions:

The following general conditions shall apply as per the type of the industry.

1) The applicant shall provide facility for collection of samples of sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.
2) The firm shall strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act,1981 and environmental protection Act 1986 and Solid Waste Management Rules, 2016 and E-Waste (Management) Rules, 2016.
3) Drainage system shall be provided for collection of sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No sewage shall be admitted in the pipes/sewers downstream of the terminal manholes. No sewage shall find its way other than in designed and provided collection system.
4) Vehicles hired for bringing construction material to the site should be in good condition and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.
5) Conditions for D.G. Set
   a) Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
   b) Industry should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.
   c) The industry shall take adequate measures for control of noise levels from its own sources within the premises in respect of noise to less than 55 dB(A) during day time and 45 dB(A) during the night time. Day time is reckoned between 6 a.m. to 10 p.m and night time is reckoned between 10 p.m to 6 a.m.
   d) Industry should make efforts to bring down noise level due to DG set, outside industrial premises, within ambient noise requirements by proper sitting and control measures.
   e) Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
   f) A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.
   g) D.G. Set shall be operated only in case of power failure.
   h) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.
   i) The applicant shall comply with the notification of MoEF dated 17.05.2002 regarding noise limit for generator sets run with diesel.
6) Solid Waste – The applicant shall provide onsite municipal solid waste processing system &shall comply with Solid Waste Management Rules, 2016 & E-Waste (M) Rules, 2016.
7) Affidavit undertaking in respect of no change in the status of consent conditions and compliance of the consent conditions the draft can be downloaded from the official web site of the MPCB.
8) The treated sewage shall be disinfected using suitable disinfection method.
9) The firm shall submit to this office, the 30th day of September every year, the environment statement report for the financial year ending 31st march in the prescribed Form-V as per the provision of rule 14 of the Environmental (Protection) Second Amended rule 1992.
10) **The applicant shall obtain Consent to Operate from Maharashtra Pollution Control Board before commissioning of the project.**

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FACILITIES FOR CONSTRUCTION WORKERS

4th floor kitchen

SKAF
URINAL
AREA
3rd floor urinal area

TREE PLANTATION PLAN

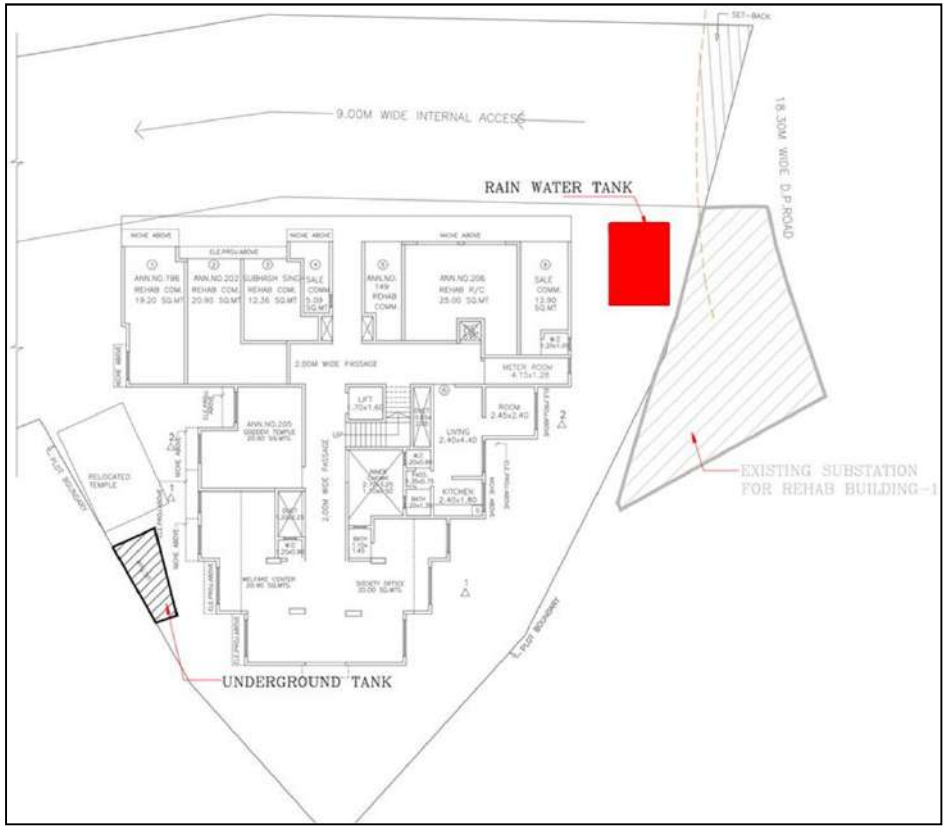
PLANT NAME	COMMON NAME	No.	SYMBOL
ANACARDIUM OCCIDENTALE	KAJU	07	
ARTOCARPUS HETEROPHYLLUS	JACK FRUIT	04	
AZADIRACHTA INDICA	NEEM	05	
BAUHINIA PURPUREA	ORCHID TREE	10	
BAUHINIA RACEMOSA	APTA	03	
BOMBAX CEIBA	RED SILK COTTON TREE	10	
BROWNE GRANDICEPS	SCARLET FLAME BEAN	07	
CARYOTA URENS	FISHTAIL PALM	07	
CASSIA FISTUL	AMALTAS	08	
CASSIA JAVANICA	PINK SHOWER	05	
DILLENIA INDICA	ELEPHANT APPLE	08	

PLANT NAME	COMMON NAME	No.	SYMBOL
ERYTHRINA INDICA	INDIAN CORAL TREE	10	
LAGERSTROEMIA SPECIOSA	PRIDE OF INDIA	09	
MANGIFERA INDICA	MANGO	06	
MIMUSOPS ELENGI	BAKUL	10	
PHOENIX DACTYLIFERA	DATE PALM	05	
SWIETENIA MAHAGONI	MAHOGANY	07	
SYZYGIUM CUMINI	BLACK PLUM	04	
TAMARINDUS INDICA	CHINCH	05	
WODYETIA BIFURCATA	FOXTAIL PALM	09	
TOTAL NUMBER OF PLANTED TREES		139 Nos	
TOTAL TREES (Planted(139)+Existing(7)+Transplanted(14))		160 Nos	

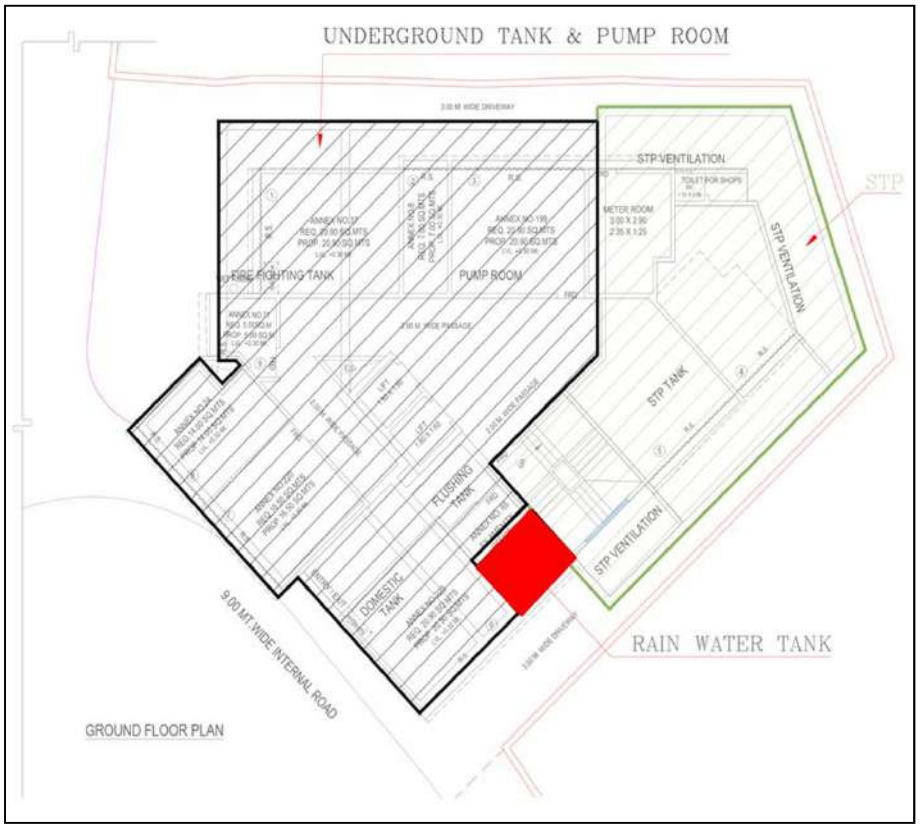
SHRUB NAME	COMMON NAME
AGLAONEMA COMMUTATUM SILVER QUEEN	INDIAN CORAL TREE
ALLAMANDA CATHARTICA	ALLAMANDA
ALOCASIA MACRORRHIZA	ELEPHANT EARS
ALPINIA PURPURATA	RED GINGER
ALPINIA ZERUMBET	ALPINIA ZERUMBET
ALPINIA ZERUMBET VARIEGATA	VARIEGATED ALPINIA
CALADIUM HORTULANU	FANCY LEAVED CALADIUM
CALATHEA LUTEA	POWDER LEAF CALATHEA
CANNA GENERALIS	DWARF CANNA BRONZE SCARLET
CHLOROPHYTUM CONOSUM VARIEGATUM	SPIDER PLANT VARIEGATED
CORDYLINE TERMINALIS MAHATMA	DRACAENA MAHATMA
CRINUM XANTHOPHYLLUM	CRINUM YELLOW
CYCAS REVOLUTA	JAPANESE SAGO PALM
DRACAENA FRAGRANS MASSANGEANA	CORNSTALK PLANT
DYPSIS LUTESCENS	ARECA PALM
EPIPREMNUM AUREUM	GOLDEN POTHOS PLANT
GARDENIA RESINIFERA	DIKAMALI
HAMELIA PATENS	HAMELIAE
HELICONIA PSITTACORUM ANDROMEDA	HELICONIA ORANGE RED UPRIGHT
HELICONIA BIHAI LOBSTER CLAW RED	HELICONIA LOBSTER CLAW RED

SHRUB NAME	COMMON NAME
HIBISCUS ROSASINENSIS RED	HIBISCUS
HYMENOCALLIS SPECIOSA	SPIDER LILY
LANTANA MONTEVIDENSIS ALBA	LANTANA WHITE CREEPING
LANTANA SELLOWIANA	LANTANA PURPLE CREEPING
NERIUM OLEANDER	NERIUM
NEPHROLEPIS EXALTATA	BOSTON FERN
OPHIOPOGON JAPONICUS	MONDO GRASS
PHILODENDRON XANADU	XANADU
RHAPIS EXCELSA	LADY PALM
RHOEO SPATHACEA COMPACTA	RHOEO COMPACTA
SPATHIPHYLLUM	PEACE LILY
SYNGONIUM PODOPHYLLUM	SYNGONIUM
TABERNAEMONTANA DIVARICATA	CRAPE JASMINE
TECOMA CAUDICHAUDI	TECOMA
TRADESCANTIA PALLIDA	SECRETIA
WEDELIA TRILOBATA	WEDELIA

PLAN SHOWING RWH SYSTEM – UNDERGROUND



Rehabilitation Building No.1
1 RWH tank of capacity 18 KL



Composite Building No.2
1 RWH tank of capacity 15 KL

RWH Tank

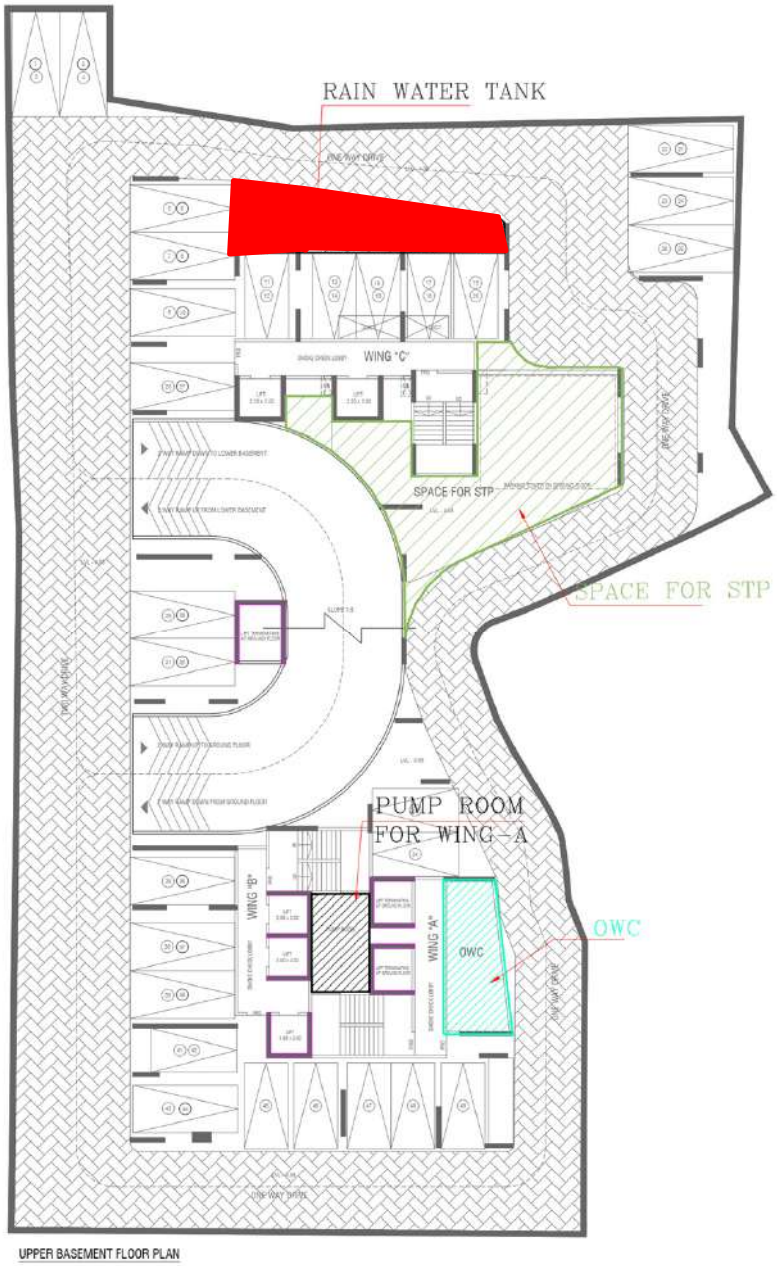
PLAN SHOWING RWH SYSTEM – 1st & 2nd PODIUM

Sale Building No.3

RWH Tanks

Provision of 2 RWH tanks of total capacity 68 KL

PLAN SHOWING RWH SYSTEM – UPPER BASEMENT

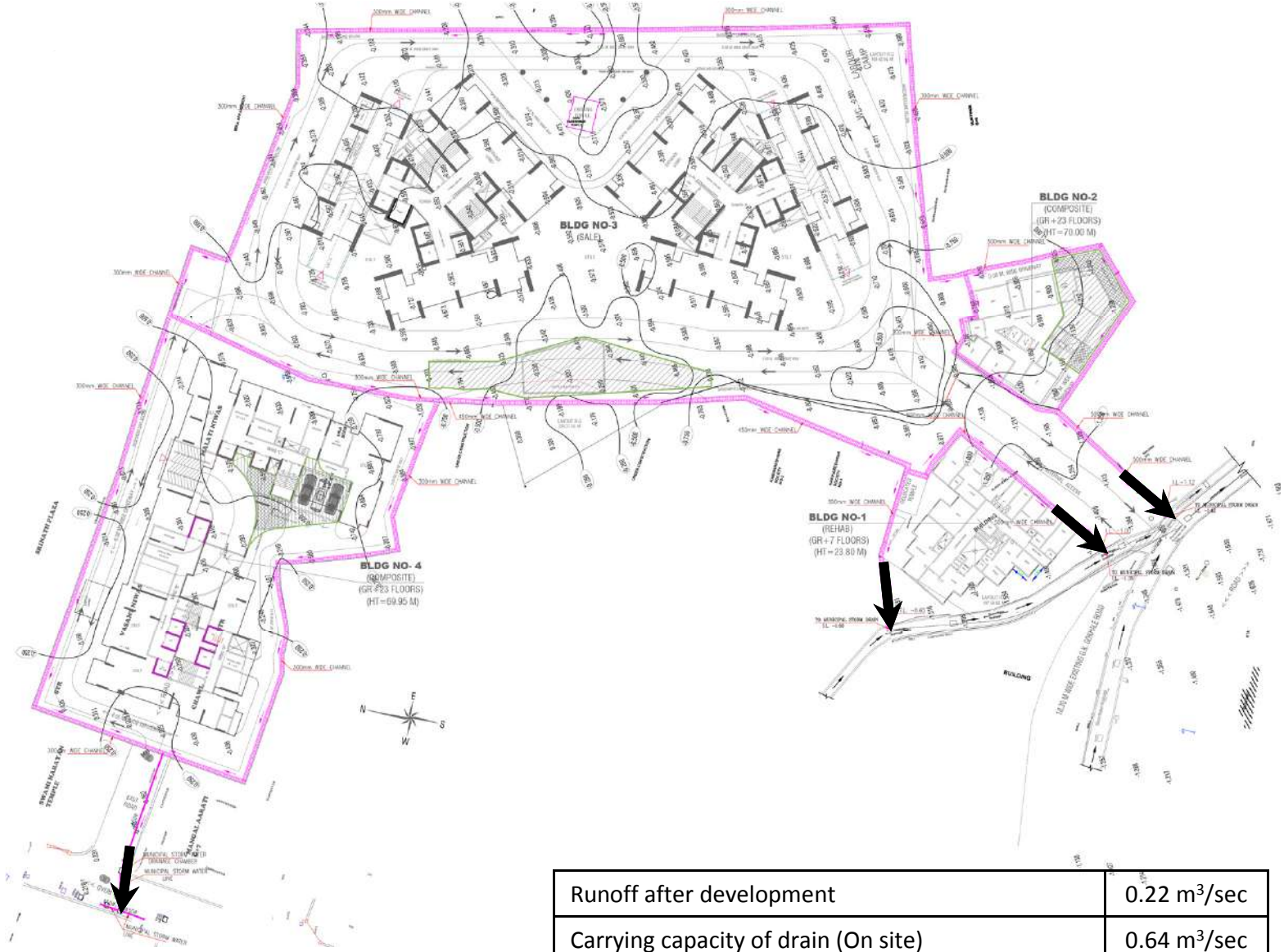


RWH Tank

Provision of 1 RWH tank of capacity 53 KL

Composite Building No.4

PLAN SHOWING SWD SYSTEM – GROUND



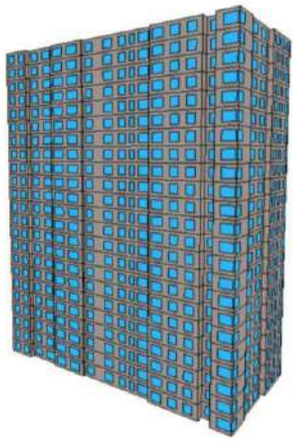
Runoff after development	0.22 m^3/sec
Carrying capacity of drain (On site) (300 mm x 300 mm – 2 nos. and 500 mm x 500 mm – 2nos. with slope 1:300)	0.64 m^3/sec

→ **Connection to External Storm Water Line**

ECBC COMPLIANCE ANALYSIS REPORT

Slum Rehabilitation Scheme

Mulund, Mumbai



Submitted on: Saturday, May 30, 2020

For

M/s. Arihant Construction Co.

By

KAIZEN DESIGN SOLUTIONS

INDEX

1	Energy Calculations against Conventional Base Case	3
2	Shadow Analysis	4
3	Terrace Area Calculations	6
4	Solar Panel Layout	7
6	Executive Summary	9
7	Project Description	10
8	Climate Analysis	11
9	ECBC Compliance	13
10	Annexures	19

Disclaimer:

This report has been prepared based on information that we believe to be reliable and accurate. We do not warrant the accuracy or completeness of the assumptions made. This report has been prepared for the exclusive use and benefit of the addressee(s) and solely for the purpose for which it is provided. Unless we provide prior written consent, no part of this report should be reproduced, distributed or communicated to any third party. We do not accept any liability if this report is used for an alternative purpose from which it is intended, nor to any third party in respect of this report.

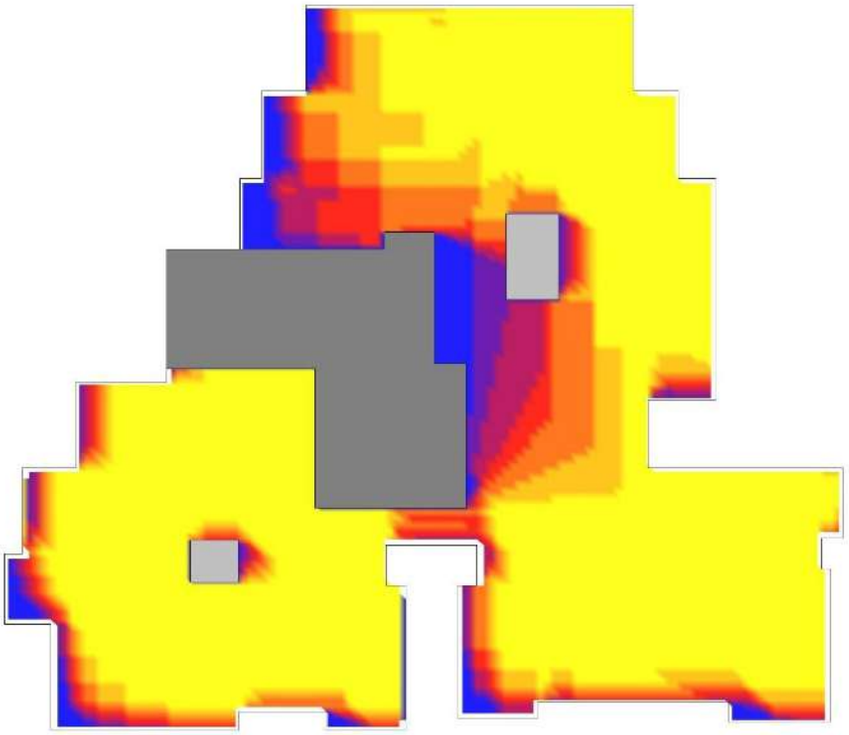
1. Energy Calculations Against Conventional Base Case (Entire Project)

Sr. No.	Building Parameters	Maximum Demand Load in kW		Energy Conservation Measures	% Savings
		Standard Base Case	Efficient Proposed Case		
A) Residential					
1	Internal Lighting	845	397	# LED Tubes & Lamps for all habitable areas	53.00
2	Air Conditioning	992	992	# Energy Efficient 5 - Star Rated Split AC, High COP	0.00
3	Equipments	625	625	# 5 A Load - TV, Telephone, Fans, Plug Points etc. # 15 A Load - Fridge, Microwave, Washing Machines etc.	0.00
4	Water Heating	666	533	# 20% of Total Hot Water requirement on Solar	20.00
B) Infrastructure					
1	Common Area Lighting	288	132	# LED Tubes for Stairs, Stores, MEP Rooms, Toilets, Lobbies	54.00
2	External / Landscape Area Lighting	141	66	# LED Lamps with Timer Based Controls	53.00
3	Parking Area Lighting	135	66	# LED Tubes for Parking Spaces	51.00
4	Plumbing, Fire, Equipment & Ventilation	441	331	# Pumps & Motors with Premium Efficiency of 80%	25.00
5	Lifts & Escalators	192	165	# Energy Efficient Lifts with VVVF Lift Drive	14.00
#	**Grand Total**	**4325**	**3308**	Total Savings in Energy Demand - 1017 kW	**23.51**

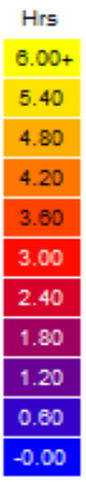
Sr. No.	Energy Conservation Measures	Savings %
1	Better Envelope Design	23.51% energy saved as per Conventional Base Case. 2.50% energy saved as per ECBC 2007 Base Case.
2	Lower Lighting Loads	
3	Efficient Air Conditioning System	
4	Efficient Pumps & Motors	
5	Solar PV System	1.06% of demand Load (35 kW)

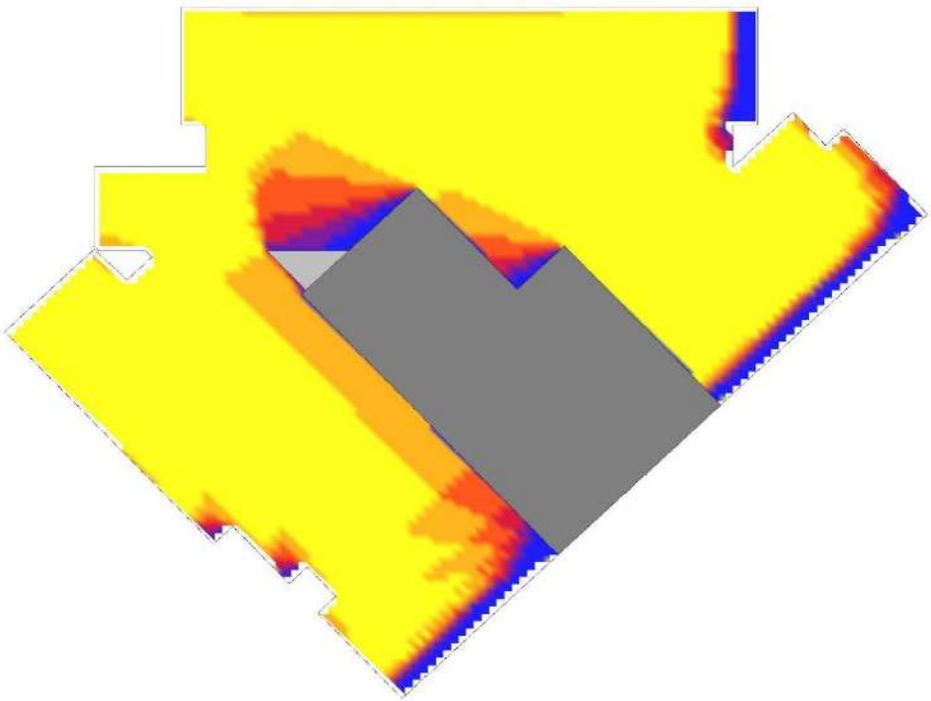
Hot water consumption	133	kW
Solar PV	35	kW
Total	168	kW
Demand Load	3308	kW
Savings through Renewable energy	**5.08%**	

2. Shadow Analysis



Rehab Building 1

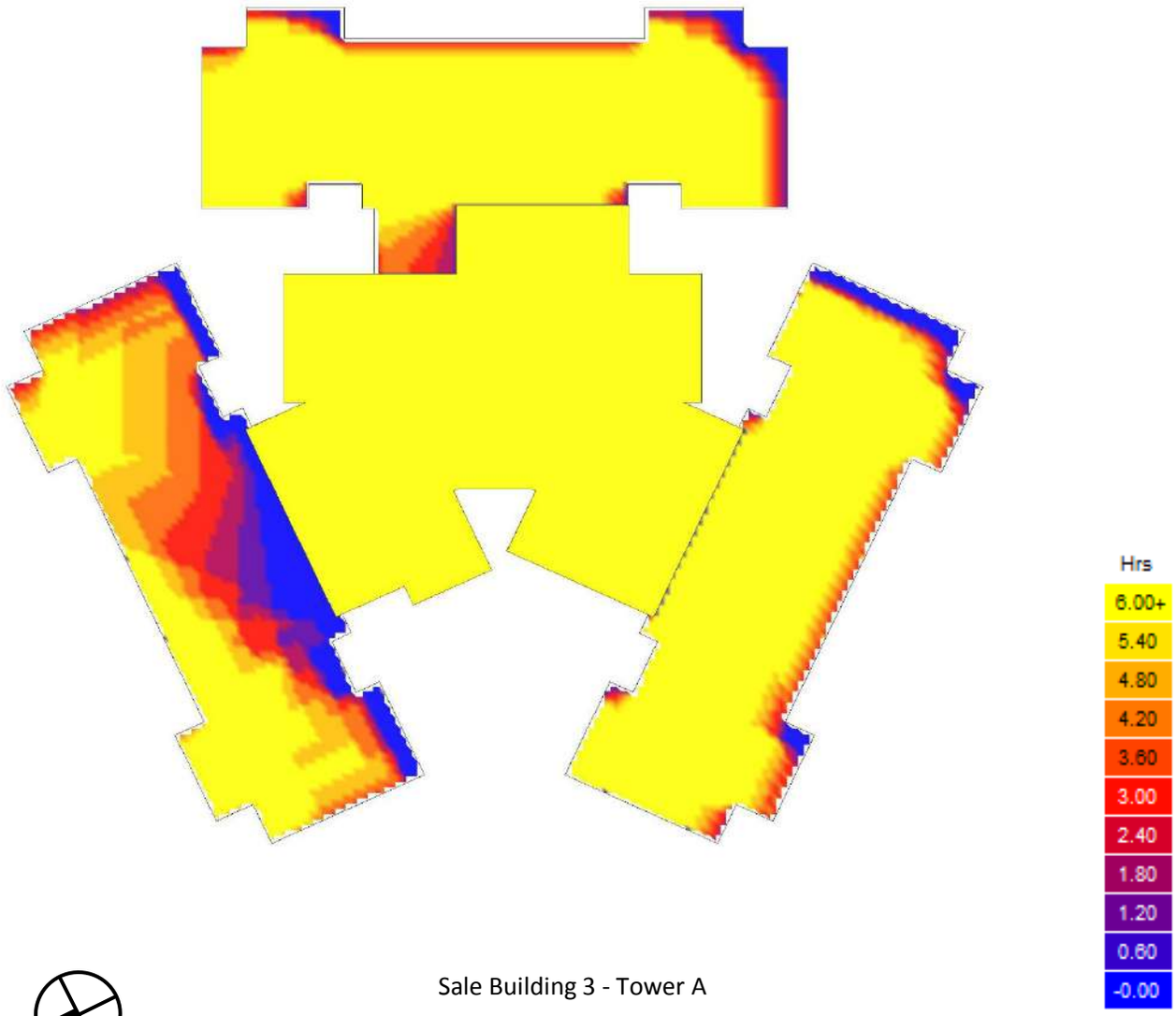




Composite Building 2

21st December – 07:30 hrs - 17.30 hrs

2. Shadow Analysis



Sale Building 3 - Tower A

21st December – 07:30 hrs - 17.30 hrs

3. Terrace Area Calculations

For the Proposed Project, Solar Hot Water is proposed for whole project and Solar PV panels are proposed to encourage the Renewable Energy use and also to encourage sustainable development.

Composite Building No.2, 4; Sale Building No.3

Total Population	-	4197		
Total Residential Hot Water Requirement	-	**83940**		**(4197 x 20 ltrs/day/person)**
Total Roof Area	-	2491	Sq.m.	
Roof Area under Shadow & Terrace Garden	-	1076	Sq.m.	
Usable Roof Area	-	1414	Sq.m.	
Solar PV Capacity on roof	-	25	kW	
Space Required for Solar PV	-	250	Sq.m.	(@ 10 sq.m. / kW)
Area Required for 1 Solar Hot Water Panel	-	2.00	Sq.m.	
Total No. Panels which can be accommodatec	-	140		
Total No. Panels Considered	-	140		
Total Hot Water Generation	-	17500	LPD	(140 x 125 ltrs / Panel)
Total % of Hot Water on Solar	**-**	**21%**		**(compared to total hot water requirement)**

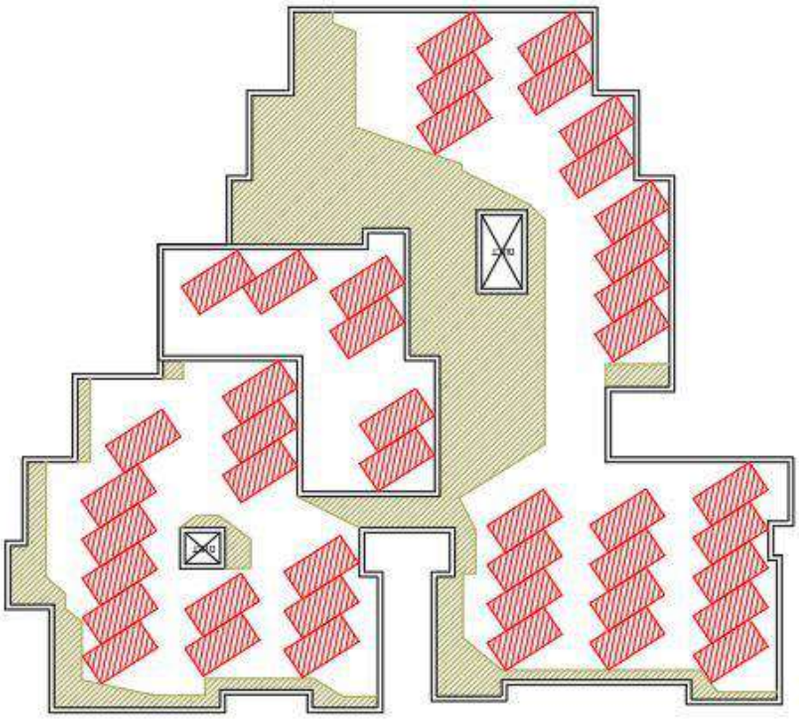
Rehabilitation Building No.1

Total Roof Area	-	328	Sq.m.	
Roof Area under Shadow	-	80	Sq.m.	
Usable Roof Area	-	249	Sq.m.	
Solar PV Capacity on roof	-	10	kW	
Space Required for Solar PV	-	100	Sq.m.	(@ 10 sq.m. / kW)

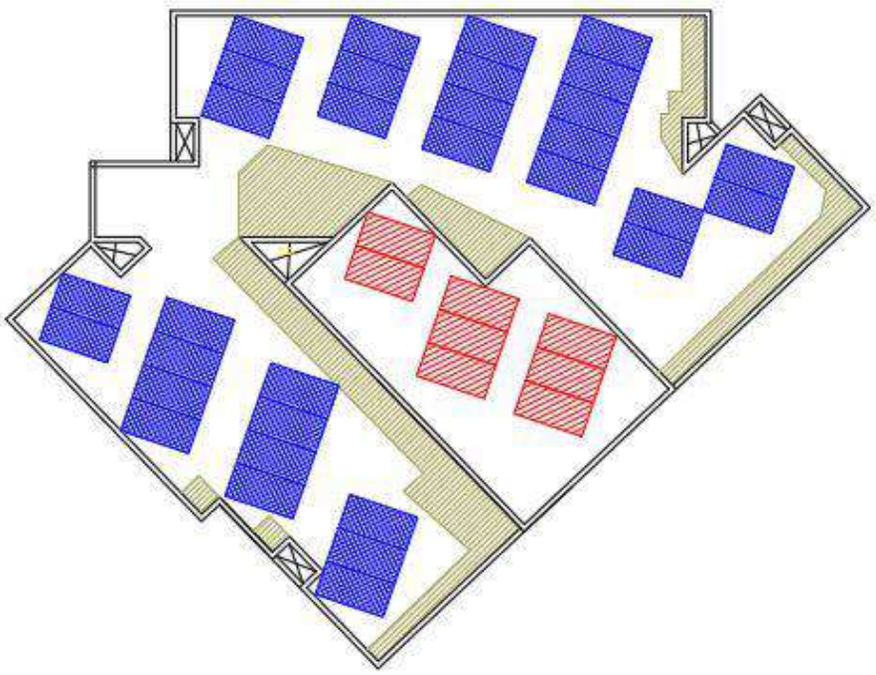
For Entire Project

Total Population	-	4433		
Total Residential Hot Water Requirement	-	**88660**		**(4433 x 20 ltrs/day/person)**
Total Solar PV Capacity	**-**	**35**	**kW**	
Total % of Hot Water on Solar	**-**	**20%**		**(compared to total hot water requirement)**

4. Solar Panel Layout



Rehab Building 1

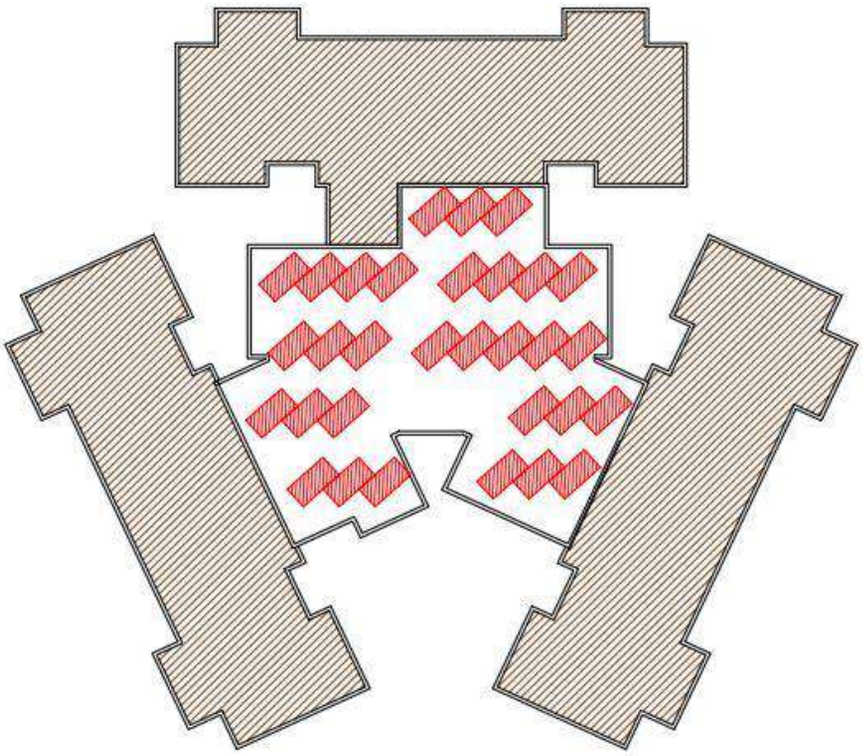


Rehab Building 2

Legend

- Shaded Area
- Solar PV Panels
- Solar Hot Water Panels

4. Solar Panel Layout



N

Sale Building 3 - Tower A

Legend

- Terrace Garden
- Shaded Area
- Solar PV Panels
- Solar Hot Water Panels

5. Executive Summary

This report has been prepared for Slum Rehabilitation Scheme, Mulund, Mumbai. This report is part of a process towards obtaining Environmental Clearance. The specific objective of this report is to evaluate annual energy usage and apply various energy efficiency measures for ECBC Compliance for maximum Energy Efficiency.

The building was analyzed using hourly energy simulation to evaluate the performance in terms of energy consumption and thermal comfort of the occupants. The purpose of this report is to present the performance of the design building in comparison to a baseline budget building based on ECBC 2007.

It is observed via various analysis tools that the buildings are properly Shaded, Naturally ventilated & has sufficient Daylight. Following are the final outcome of energy simulation of the proposed buildings.

		ECBC 2007	**Proposed Case**	**Proposed Case + Solar PV**
EPI	(kWh/sm/yr)	94.5	92.2	91.7
Energy Consumption	(MWh)	11,985	11,685	11,629
Energy Saving			**2.50%**	**2.97%**

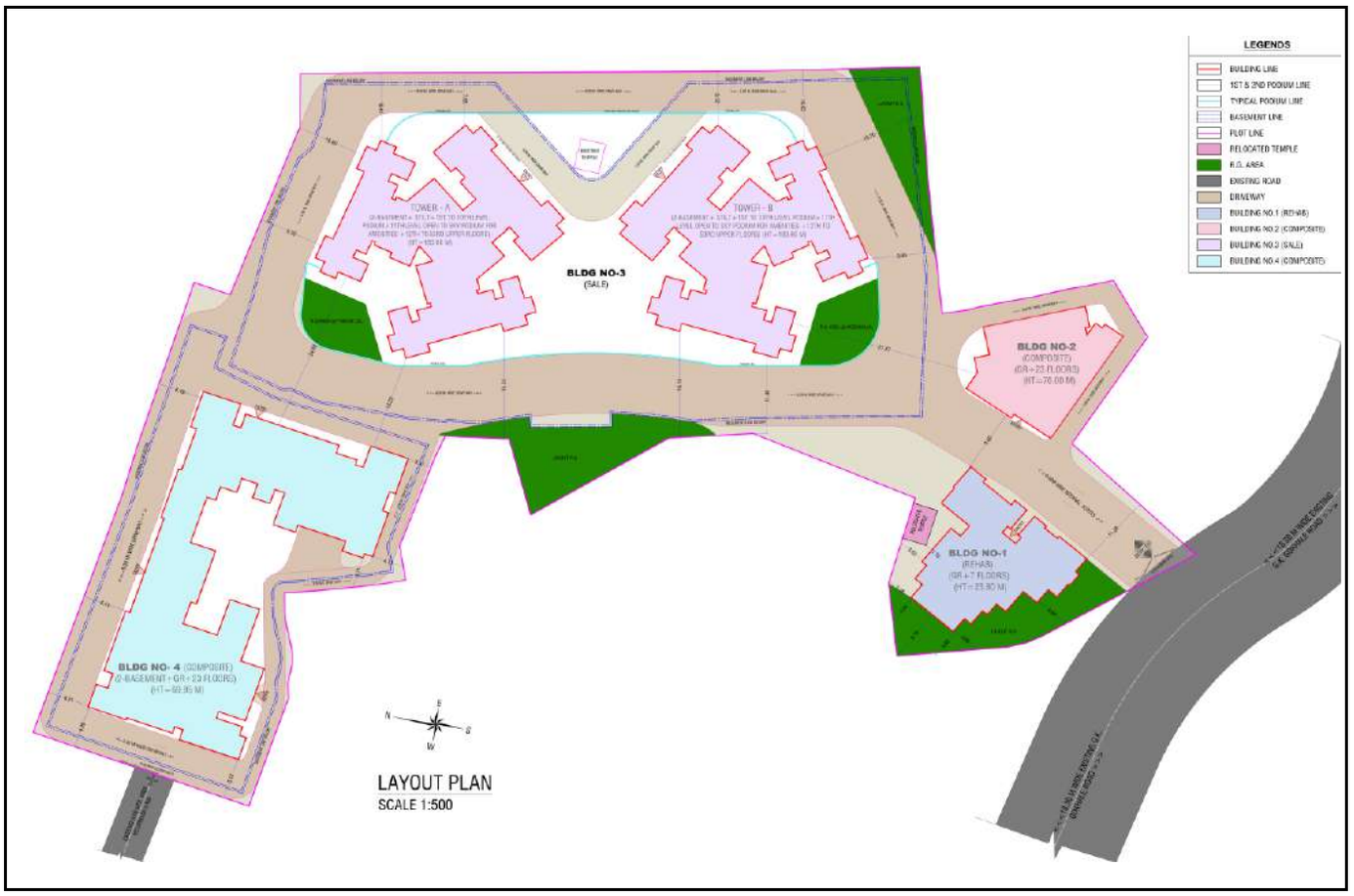
6. Project Description

This report has been prepared for Slum Rehabilitation Scheme, Mulund, Mumbai. This report is part of a process towards obtaining Environmental Clearance from MOEF. The specific objective of this report is to evaluate annual energy usage and apply various energy efficiency measures for ECBC Compliance for maximum Energy Efficiency.

TYPICAL BUILDINGS OF THE PROJECTS

1 Rehabilitation Building No.1
2 Composite Building No.2
3 Sale Building No.3 - Wing A & B
4 Composite Building No.4

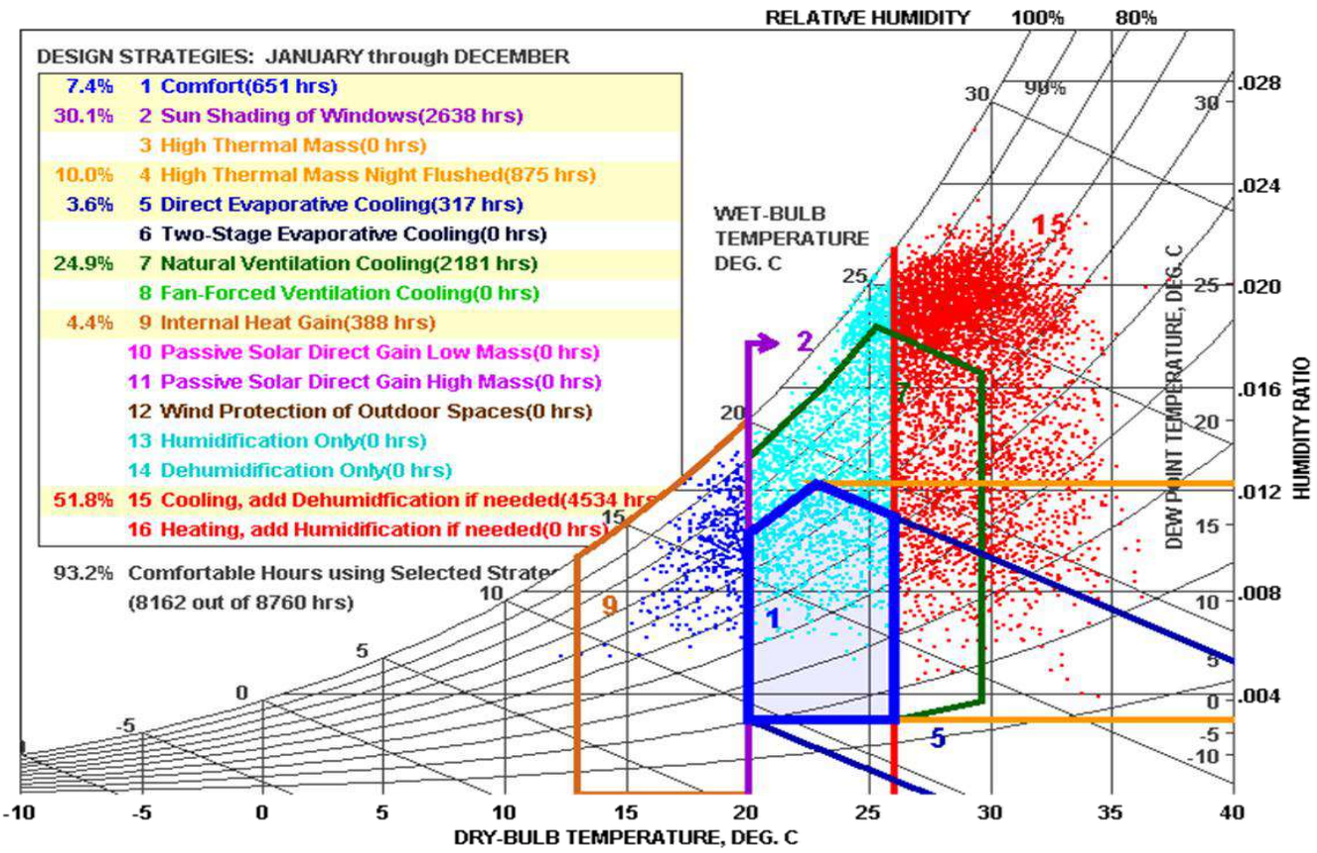
SITE LAYOUT



PROJECT DETAILS

1	Total Site Area	9,407.90	sq.m.	
2	Total Built-up Area	126,792.41	sq.m.	
3	WWR	22%		
4	No. of Dwelling Units	930	nos.	
5	Solar PV Panel Capacity	35	kWp	(1.06% of Demand Load)
6	Connected Load	4136	kW	
7	Demand Load	3308	kW	
8	Solar Hot Water Capacity	20%	of Hot Water Demand	

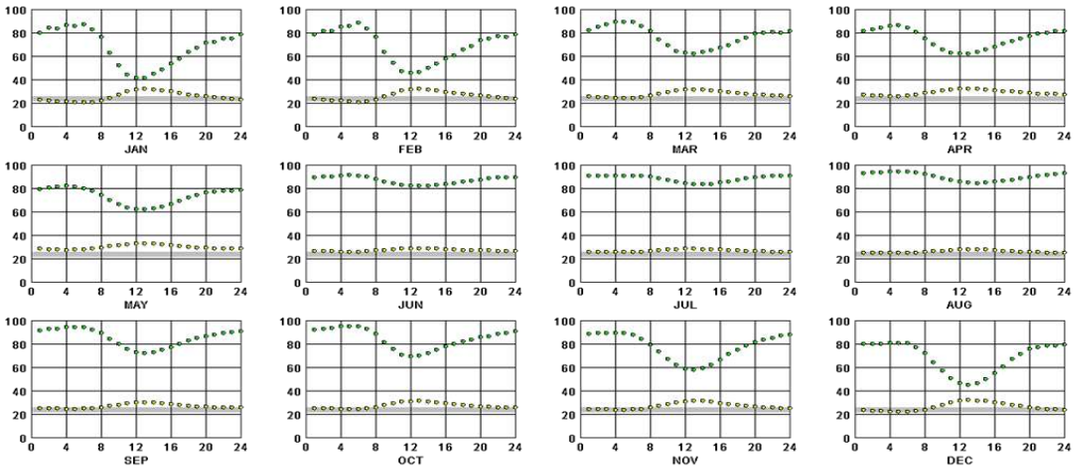
7. Climate Analysis



Psychrometric Chart above explains that, no other strategy is effective for passive comfort except Solar Shading & Natural Ventilation. Strategies like direct evaporative cooling, internal heat gain and High thermal mass are also effective, but for a lesser period. Around 30% of total comfort hours can be achieved by Sun Shading. Around 27% of total comfort hours can be achieved by Natural Ventilation. From all the above strategies around 50 % of total comfort hours can be achieved by Sun Shading and Natural Ventilation & for the rest 50% of the time air conditioning may be required. For this analysis, the Comfort Criterion was set at 20 to 26 degree C for dry bulb temperature & relative humidity to 70%.

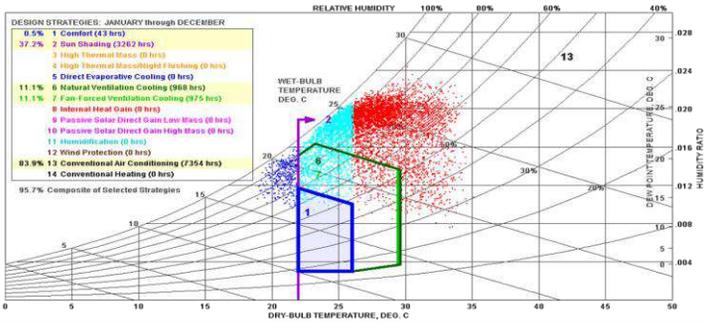
The Pshychrometric Chart above confirms that the four effective strategies are Shading, Ventilation, Internal heat gain and Evaporative cooling. The graph plot on next page shows the degree difference between the Dry Bulb Temperature & Relative Humidity. As per the legend, at least 30% of the total hours are in comfort range with an effective wind speed of 3 to 5 m/s. Fan forced ventilation is also an effective strategy during monsoon period.

Next is the annual wind pattern of Mumbai city. The purpose is to understand this Wind Pattern. If you observe the legend carefully, you will understand that, 22% of the total annual wind is flowing from West direction, which has a temperature around 20 to 26 degree C, with a humidity around 70% & maximum wind speed is 6 m/s at one point of time. The predominant wind direction in Monsoon Period is west.



DRY BULB X RELATIVE HUMIDITY

Dry Bulb
Humidity
Comfort Zone

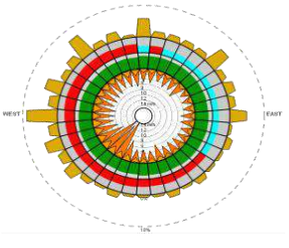


DRY-BULB TEMP (degrees C)		
0%		< 0
4%		0 - 22
34%		22 - 26
61%		26 - 38
0%		> 38

WIND SPEED (m/s)		
23%		< 2
34%		2 - 3
35%		3 - 5
6%		5 - 9
0%		> 9

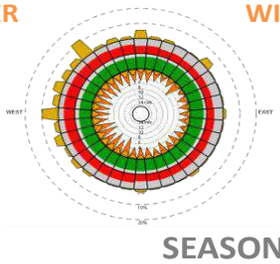
TEMPERATURE (Deg. C)
- < 0
- 0 - 22
- 22 - 26
- 26 - 38
- > 38

RELATIVE HUMIDITY (%)
- <30
- 30-70
- >70

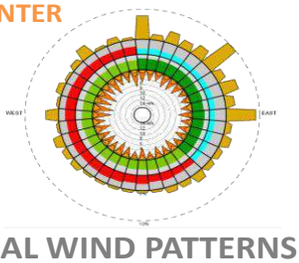


ANNUAL WIND PATTERNS

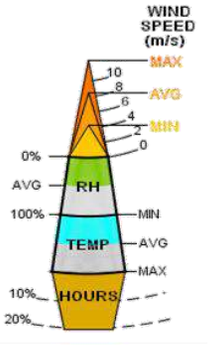
SUMMER



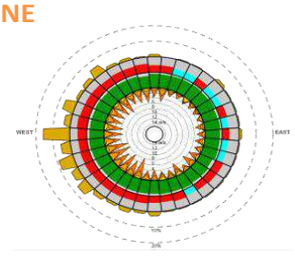
WINTER



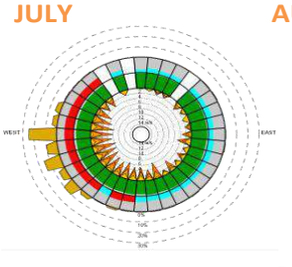
SEASONAL WIND PATTERNS



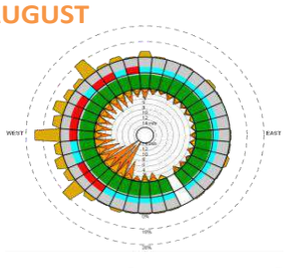
JUNE



JULY



AUGUST



MONTH WISE DETAILS

8. ECBC 2007 Compliance

SECTION 4 - BUILDING ENVELOPE

4.2.1 Fenestration: The vertical fenestration of the project is labelled by manufacturer. The following value will be considered for the same,

	Proposed	Existing	
U-value:	4.60	5.70	W/sm.K
SHGC:	0.42	0.67	
VLT:	45%	66%	

4.2.2 Opaque Construction: The U-value of roof and wall assembly are calculated and provided as per Annexure V.

4.2.3 Building Envelope Sealing: All spaces of the project are naturally ventilated, therefore the criteria don't apply to them.

SECTION 5 - COMFORT SYSTEM AND CONTROLS

5.2.1 Natural Ventilation: The project buildings are naturally ventilated and they comply with all the guidelines provided in NBC 2016, Part 8, 5.4.2 and 5.7.1. The fans are only provided in the common facilities which will be BEE 3-star rated or more. Additionally, the tenant will be suggested to select efficient ceiling fans.

5.2.2 Minimum Space Conditioning Equipment Efficiencies: The clause is not applicable to this project as all the tenant areas are naturally ventilated. The project team would suggest the tenant to install energy efficient air conditioning system through their tenant guidelines.

5.2.3 Controls: The controls like timelock, temperature controls, occupancy controls, fan controls, dampers etc. are associated with air-conditioning, hence they are not applicable.

5.2.4 Piping & Ductwork: Not Applicable.

5.2.5 System Balancing: Not Applicable.

5.2.6 Condensers: Not Applicable.

SECTION 6 - SERVICE WATER HEATING AND PUMPING

6.2.1 Solar Water Heating: The project will have solar water heating for 20% of the design capacity.

6.2.2 Equipment Efficiency: The solar water heater will meet efficiency level as per IS 13129 Part 1 & 2.

6.2.3 Supplementary Water Heating System: Not Applicable.

6.2.4 Piping Insulation: The piping and storage tanks will be insulated with minimum R-value of 0.74 sq.m.K/W.

SECTION 7 - LIGHTING

7.2.1 Lighting Controls: The buildings are residential type and each zone of them are smaller than 30 sq.m. Hence, the lighting controls are not applicable for the space size and building type as well.

7.2.2 Exit Signs: All the electrically powered emergency signs, if there any, will use LED.

7.2.3 Exterior Building Grounds Lighting: No exterior luminaires shall be controlled by a motion sensors. All of them will be LED with timer based control, and they will meet minimum efficacy of 60 lm/W.

SECTION 8 - ELECTRICAL POWER

8.2.1 Transformers: The transformers selected are CPCB approved. Power transformer of optimum rating and design will be selected to satisfy the min. acceptable efficiency at 50% and full load rating as per ECBC 2007.

8.2.2 Energy-efficient Motors: All the pumps and motors to be used in the project will be compliant with the relevant IS standards. Motor horsepower rating will not exceed 20% of calculated maximum demand being served.

8.2.3 PF Correction: The Power factor would be maintained in the project with the help of Automatic Power Factor Correction (APFC) system. The system is designed to maintain the power factor of 0.95.

8.2.4 Check-Metering and Monitoring: The project has made provisions for metering. The Energy meters are capable of monitoring Energy consumption (kWh), Demand (kW), Power factor, etc. The metering will also display Current, Voltage and Total Harmonic Distoration as a percentage of total current. As the project is multi-tenant occupied project, there are individual meters provided for each tenant by the Electricity board and separate bills are provided to each of them.

8.2.5 Power Distribution Systems: The power cables in the project are designed suitably to reduce the distribution losses. The design ensures that distribution losses are less than 1% of the total power usage.

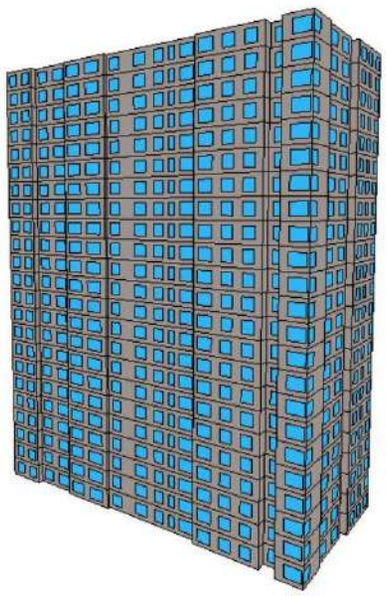
WHOLE BUILDING PERFORMANCE METHOD

Project: Slum Rehabilitation Scheme, Mulund, Mumbai

Zoning: A zoning plan was developed for each floor & entered into the simulation model. Each zone was assigned a set of properties including lighting power density, equipment power density, occupancy rate, outside air requirement etc. Each zone was also assigned physical properties of floor-to-floor height, material conductivity & fenestration area etc.

Modelling: A baseline building as per the properties stated in ECBC 2007 was modelled. The Building was simulated with actual orientation and again after rotating the entire Building by 90, 180 & 270 Degrees and then the annual energy consumption results were averaged out to get the ECBC 2007 Baseline Building Energy consumption in Megawatt hours. As per ECBC 2007, the average base case energy consumption does not consider the effect of building shades & overhangs.

A wide range of actual as-designed parameters such as Envelope (roofs, walls), Windows (type of window glass), Lighting (lighting power density), reduced Exterior Lighting, efficient system design were added to the Baseline case to simulate the performance of the designed building.



The project has been modelled with the e-QUEST energy analysis software that uses the DOE 2.2 Building energy simulation engine. The e-QUEST energy modelling software allows for a graphical display of all the 3-dimensional geometry entered in the application to describe the building. As per the view shown, the Building has been modelled in detail to improve the accuracy of analysis work.

The project objective is to evaluate energy use and the energy efficiency performance of the Building.

DETAILED COMPARISON BETWEEN BASE CASE & PROPOSED CASE

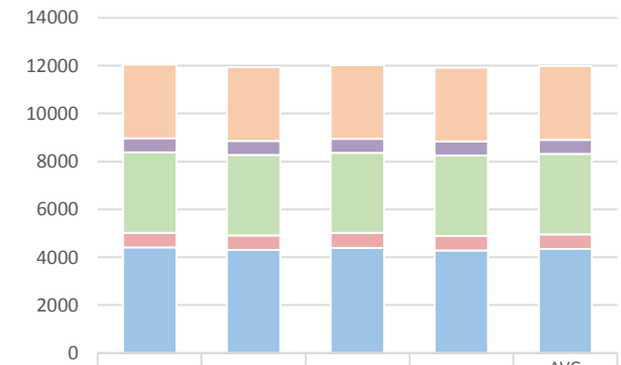
The simulation model for calculating the Proposed Design and the Standard Design shall be developed in accordance with the requirements in Table 10.1 in ECBC 2007.

Sr. No.	Model Input Parameter	Baseline Case (As per ECBC 2007)	Proposed Case
1	**Exterior Wall Construction**	U-factor: 0.44 W/Sq.m.K	U-Value: 2.59 W/Sq.m.K 6" External Brick Wall (Exisiting) U-Value: 0.85 W/Sq.m.K 6" AAC Wall (Building 2 & 4) U-Value: 3.17 W/Sq.m.K 6" RCC Wall (Sale Building 3)
2	**Roof Construction**	U Value: 0.26 W/Sq.m.K	U-Value: 0.47 W/Sq.m.K 6" RCC Slab with 2" XPS insulation
3	**Glazing**	U Value: 3.30 W/Sq.m.K SHGC: 0.25	Proposed / Exisiting U Value: 4.60 W/Sq.m.K / 5.70 W/Sq.m.K SHGC: 0.42 / 0.67 VLT: 45% / 66%
4	**WWR**	22%	22%
5	**Shading**	No shades	Shading effect of solar panel on roof and shading devices on all facade is considered.
6	**EPD (W/Sq.m.)**	15	15
7	**Pumps & Motors**	IE 1	IE 2
8	**LPD (W/Sq.m.)**	7.5	5.0
9	**External Lighting Load (kW)**	As per Annexure IV	30% lesser than Annexure IV
10	**Domestic Hot Water**	20% on Solar (20 ltr/person/day)	20% on Solar (20 ltr/person/day)
11	**HVAC System Type**	Packaged Single Zone (Split Unit) with COP 3.0.	Packaged Single Zone (Split Unit) with COP 5.0
12	**Process Loads**	As per Design	As per Design
13	**DG Set**	CPCB Approved	CPCB Approved
14	**PF Correction**	0.95	0.95
15	**Power Distribution Losses**	< 1%	< 1%

BASELINE MODEL - AS PER ECBC 2007

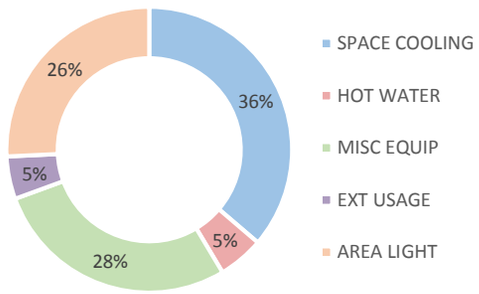
The ECBC 2007 Minimally Compliant Baseline model is used to benchmark the design case. This model geometry is based upon the design case, but the performance parameters listed below are defined to reflect the minimum efficiency levels that ECBC 2007 defines for various building components.

ENERGY-USE COMPARISION FOR ALL END USES
BASELINE CASE (MWh) - As per ECBC 2007



	0°	90°	180°	270°	AVG BASELINE
AREA LIGHT	3086	3086	3086	3086	3086
EXT USAGE	579	579	579	579	579
MISC EQUIP	3356	3356	3356	3356	3356
HOT WATER	620	620	620	620	620
SPACE COOLING	4405	4301	4392	4279	4345

BASELINE CASE - As per ECBC 2007



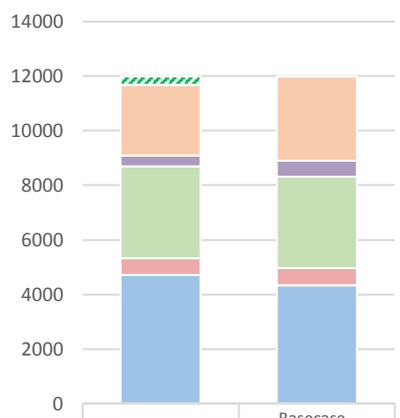
Based on the above paramters, the average Base-Case

Consumption is **11,985 MWh**
The EPI is **94.52 kWh / sq.m. / yr**

PROPOSED CASE MODEL

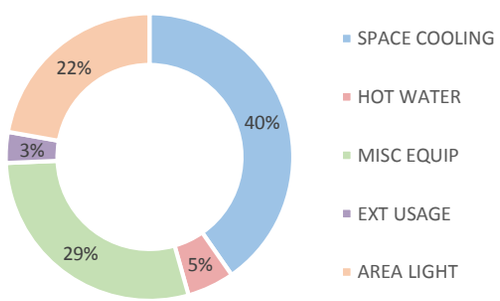
Proposed case assumptions are based on project drawings and operating parameters assumptions based on experience and standards.

ENERGY-USE COMPARISION FOR ALL END USES
PROPOSED v/s BASELINE



	Proposed Case	Basecase - ECBC 2007
SAVING IN ELECTRICITY	300	
AREA LIGHT	2594	3086
EXT USAGE	405	579
MISC EQUIP	3356	3356
HOT WATER	620	620
SPACE COOLING	4710	4345

PROPOSED CASE



Based on the above paramters, the average Proposed - case

Consumption is **11,685 MWh**
The EPI is **92.16 kWh / sq.m. / yr**

SUMMARY

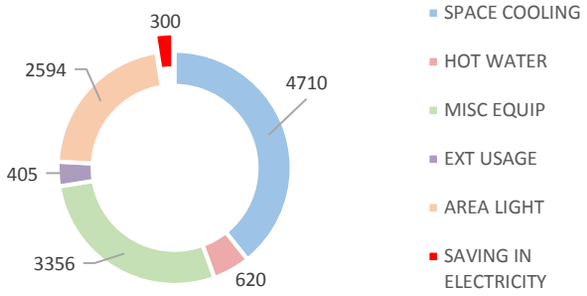
The Proposed case model shows significant savings in internal lighting as well as space cooling energy consumption as compared with the ECBC 2007 stipulated baseline model. These energy reductions can primarily be attributed to improved lighting power density and reduction in cooling loads due to improved envelope and glazing specifications.

For the purposes of determining energy savings in rupees, the energy costs for the proposed case model are compared to the energy costs for the ECBC 2007 minimally-compliant model.

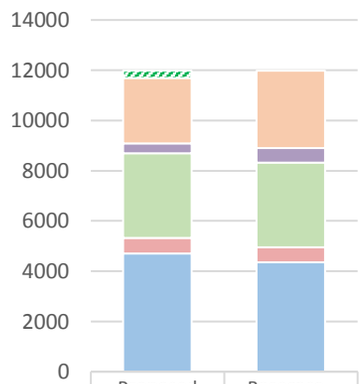
Based on the final design considerations for building envelope and equipment, it is noted from the results of energy simulation that by using efficient envelope and lighting, the total per year energy required for the project - Slum Rehabilitation Scheme, Mulund, Mumbai, are as under:

Proposed project	11,685	MWh
Base line - ECBC 2007	11,985	MWh
Saving over ECBC 2007 - MWh	**300**	**2.50%**

ENERGY (MWh) FOR END-USES PROPOSED CASE SHOWING SAVING OVER BASELINE - ECBC 2007



ENERGY-USE COMPARISION FOR ALL END USES
PROPOSED v/s BASELINE



	Proposed Case	Basecase - ECBC 2007
SAVING IN ELECTRICITY	300	
AREA LIGHT	2594	3086
EXT USAGE	405	579
MISC EQUIP	3356	3356
HOT WATER	620	620
SPACE COOLING	4710	4345
Total	11685	11985

Annexure I: Schedules

RESIDENTIAL BUILDINGS

	Occupancy		Lighting		Equipment		HVAC		Hot Water
Hrs	Weekdays	Weekends	Weekdays	Weekends	Weekdays	Weekends	Weekdays	Weekends	All Days
0:00	100%	100%	10%	10%	5%	5%	75%	75%	0%
1:00	100%	100%	10%	10%	5%	5%	75%	75%	0%
2:00	100%	100%	10%	10%	5%	5%	75%	75%	0%
3:00	100%	100%	10%	10%	5%	5%	75%	75%	0%
4:00	100%	100%	10%	10%	5%	5%	75%	75%	0%
5:00	100%	100%	10%	10%	5%	5%	75%	75%	0%
6:00	100%	100%	10%	10%	5%	5%	75%	75%	0%
7:00	100%	100%	40%	40%	25%	5%	50%	75%	0%
8:00	100%	100%	0%	0%	40%	25%	20%	50%	25%
9:00	50%	100%	0%	0%	25%	40%	0%	20%	50%
10:00	25%	50%	0%	0%	5%	25%	0%	0%	50%
11:00	25%	50%	0%	0%	5%	20%	0%	0%	0%
12:00	25%	100%	0%	0%	5%	20%	0%	0%	0%
13:00	25%	100%	0%	0%	20%	20%	25%	50%	0%
14:00	25%	100%	0%	0%	20%	15%	25%	50%	0%
15:00	25%	100%	0%	0%	5%	5%	0%	0%	0%
16:00	25%	50%	0%	0%	5%	5%	0%	0%	0%
17:00	50%	50%	25%	25%	5%	5%	0%	0%	0%
18:00	50%	25%	50%	20%	20%	25%	0%	0%	0%
19:00	75%	25%	80%	20%	25%	25%	0%	0%	50%
20:00	100%	25%	80%	20%	50%	25%	25%	25%	50%
21:00	100%	25%	80%	50%	50%	40%	25%	25%	0%
22:00	100%	100%	50%	50%	20%	25%	50%	50%	0%
23:00	100%	100%	10%	10%	5%	5%	75%	75%	0%

Annexure II: Renewable Energy

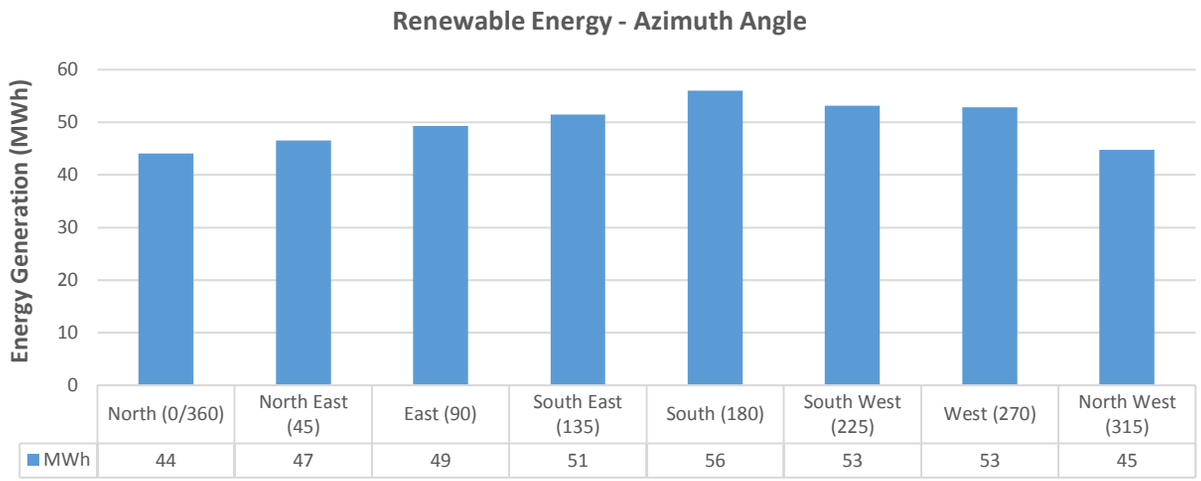
Virtual analysis tool – Retscreen has been used as a basis for the commentary provided in this report. To determine Orientation and Slope of the proposed Solar Panel actual location Mumbai was used for the simulation.

Total Connected Load for Proposed Project	4136	kW
Maximum Demand for load of proposed project	3308	kW
1% of demand load	33.08	kW
Renewable energy proposed for the Project	35	kW

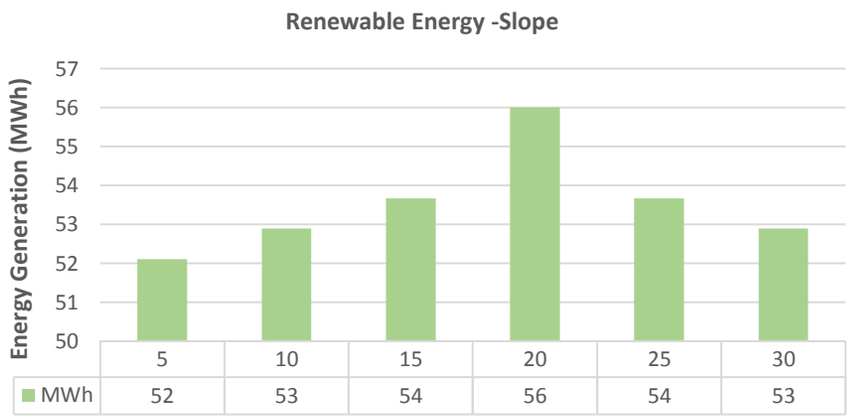
It is determined through simulation that the solar panels of 35 kWp capacity will generate 56 MWh electricity annually. The desired Solar Panel locations are proposed considering right Orientation (Azimuth Angle) and Slope (Altitude Angle) of Solar Panel.

RET Screen Calculation		
Solar tracking mode		Fixed
Slope		20
Azimuth		180
Solar Data		
Photovoltaic		
Type		poly - Si
Power Capacity	**kW**	35
Manufacturer		Canadian Solar
Model		CS6U - 325P
Number of Units		108
Efficiency	%	16.7%
Nominal operating cell temperature	° C	43
Temperature coefficient	% / ° C	0.4
Solar collector area	m^2	216
Miscellaneous losses	%	5%
Summary		
Electricity generated	**MWh**	56

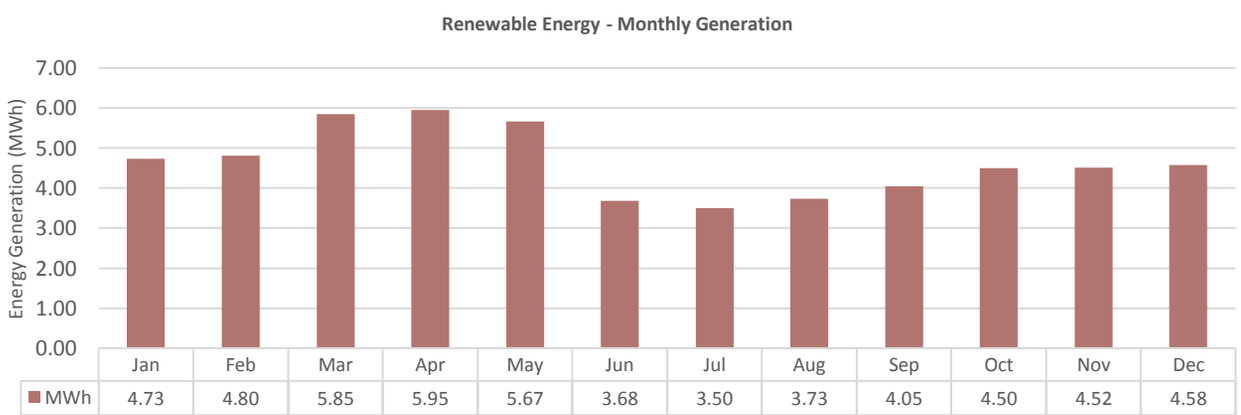
Parametric Study - Azimuth Angles



Parametric Study - Altitude Angles



Monthly Solar Generation



Annexure III: Exterior Building Lighting Power

ECBC 2017 - Table 6-7 Exterior Building Lighting Power for ECBC Buildings

Exterior lighting application	Power limits
Building entrance (with canopy)	10 W/m2 of canopied area
Building entrance (w/o canopy)	90 W/ linear m of door width
Building exit	60 W/lin m of door width
Building façade	5.0 W/m2 of vertical façade area
Emergency signs, ATM kiosks, Security areas façade	1.0 W/m2
Driveways and parking (open/ external)	1.6 W/m2
Pedestrian walkways	2.0 W/m2
Stairways	10.0 W/m2
Landscaping	0.5 W/m2
Outdoor sales area	9.0 W/m2

Annexure IV: Electrical Wires

It is recommended to use copper wires with high rating to reduce resistance, which would result in energy efficiency. Copper has the highest electrical conductivity of any metal, after silver, with this property accounting for over 50% of its use. As the best, economically affordable conductor of electricity, using copper can reduce electrical energy losses and improve overall energy efficiency.

Annexure V: U-value Calculations

Building Envelope

Calculation Of 'U' Value For A Wall Section (Exisiting Building 1)

Material Specification		'R' Value (sq.ft.degF/btu)
1	Outside Air Film	0.17
2	1" Cement Plaster	0.2
3	6" External Brick Wall	1
4	0.5" Cement Plaster	0.1
5	Insdie Wall Air Film	0.64
	Total	**2.19**

Therefore,

R' Value of Vertical surface (Wall)		2.19	sq.ft.degF/btu
U Value	(I-P Unit) :	0.46	btu/sq.ft.degF
	(SI Unit) :	**2.59**	**W/sm.degK**

Calculation Of 'U' Value For A Wall Section (Building 2 & 4)

Material Specification		'R' Value (sq.ft.degF/btu)
1	Outside Air Film	0.17
2	1" Cement Plaster	0.2
3	6" AAC Wall	5.49
4	0.5" Cement Plaster	0.1
5	Insdie Wall Air Film	0.64
	Total	**6.68**

Therefore,

R' Value of Vertical surface (Wall)		6.68	sq.ft.degF/btu
U Value	(I-P Unit) :	0.15	btu/sq.ft.degF
	(SI Unit) :	**0.85**	**W/sm.degK**

Annexure V: U-value Calculations

Building Envelope

Calculation Of 'U' Value For A Wall Section (Sale Building 3)

Material Specification		'R' Value (sq.ft.degF/btu)
1	Outside Air Film	0.17
2	1" Cement Plaster	0.2
3	6" RCC Wall	0.6
4	0.5" Cement Plaster	0.1
5	Insdie Wall Air Film	0.64
	Total	**1.79**

Therefore,

R' Value of Vertical surface (Wall)		1.79	sq.ft.degF/btu
U Value	(I-P Unit) :	0.56	btu/sq.ft.degF
	(SI Unit) :	**3.17**	**W/sm.degK**

Calculation Of 'U' Value For A Roof Section

Material Specification		'R' Value (sq.ft.degF/btu)
1	Outside Air Film	0.17
2	Floor Finish	0.15
3	1" Screed	0.2
4	2" XPS Insulation	10.14
5	1" Screed	0.2
6	6" Concrete Slab	0.6
7	½" Cement Plaster	0.1
8	Inside Ceiling Air Film	0.61
	Total	**12.17**

Therefore,

R' Value of Vertical surface (Roof)		12.17	sq.ft.degF/btu
U Value	(I-P Unit) :	0.08	btu/sq.ft.degF
	(SI Unit) :	**0.47**	**W/sm.degK**

ADVERTISEMENT

PUBLIC NOTICE

All the concern persons including bonafide residents, environmental groups & other are hereby informed that the Department of Environment, Government of Maharashtra has accorded Environmenal Clearances to M/s. ARIHANT CONSTRUCTION CO. for their project "Proposed Cluster Redevelopment Schemes CDS Under DCR 33(10) on land bearing CTS No. 669(PT), CTS No. 669/1 to 35 & 670,610, 610/1 to 26, 666 and CTS No. 673, 673/1 to 7, of village Mulund, "T" Ward, for Project by M/S. ARIHANT CONSTRUCTION CO. vide letter no. - SIA/MH/MIS/155920/2020 Dated08/07/20 Published on 11.07.2020. The copy of clearance letter is available with on the website of the State Environment Impact AssessmentAuthority Maharashtra at environmentclearance.nic.in

जाहीर सूचना

रहिवासी, पर्यावरणसंबंधी ग्रुप्स आणि इतर सर्व संबंधित व्यक्तींना कळविण्यात येते की, महाराष्ट्र सरकारच्या पर्यावरण विभागाने मे. अरिहंत कन्स्ट्रक्शन कंपनी त्यांच्या प्रकल्पासाठी प्रस्तावित झोपडपट्टी पुनर्वसन योजना डी. सी. पी. आर. २०३४च्या ३३(१०)च्या कायद्याअंतर्गत सि.टी.एस.क्र. ६६९(पै), सि.टी.एस.क्र. ६६९/१ ते ३५ आणि ६७०, ६१०/१ ते २६,६६६ आणि सि.टी.एस.क्र. ६७३, ६७३/१ ते ७, मौजे - मुलुंड, "टी" वार्डमध्ये, गोपाळ कृष्णा गोखले रोड, मुंबई-४०००८१. प्रकल्पासाठी मे. अरिहंत कन्स्ट्रक्शन कंपनी येथील रहिवासी गृहसंकुल बांधकामास क्रमांक-SIA/MH/MIS/153429/2020दिनांक ०८.०७.२०२० द्वारे परवानगी दिली आहे व ११.०७.२०२० रोजी प्रकाशित झाली आहे. सदर पत्र पर्यावरण विभाग महाराष्ट्र (www.environmentclearance.nic.in) यांच्या संकेत स्थळावर पाहता येतील.